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Over 70 Illustrations.

Illustrated

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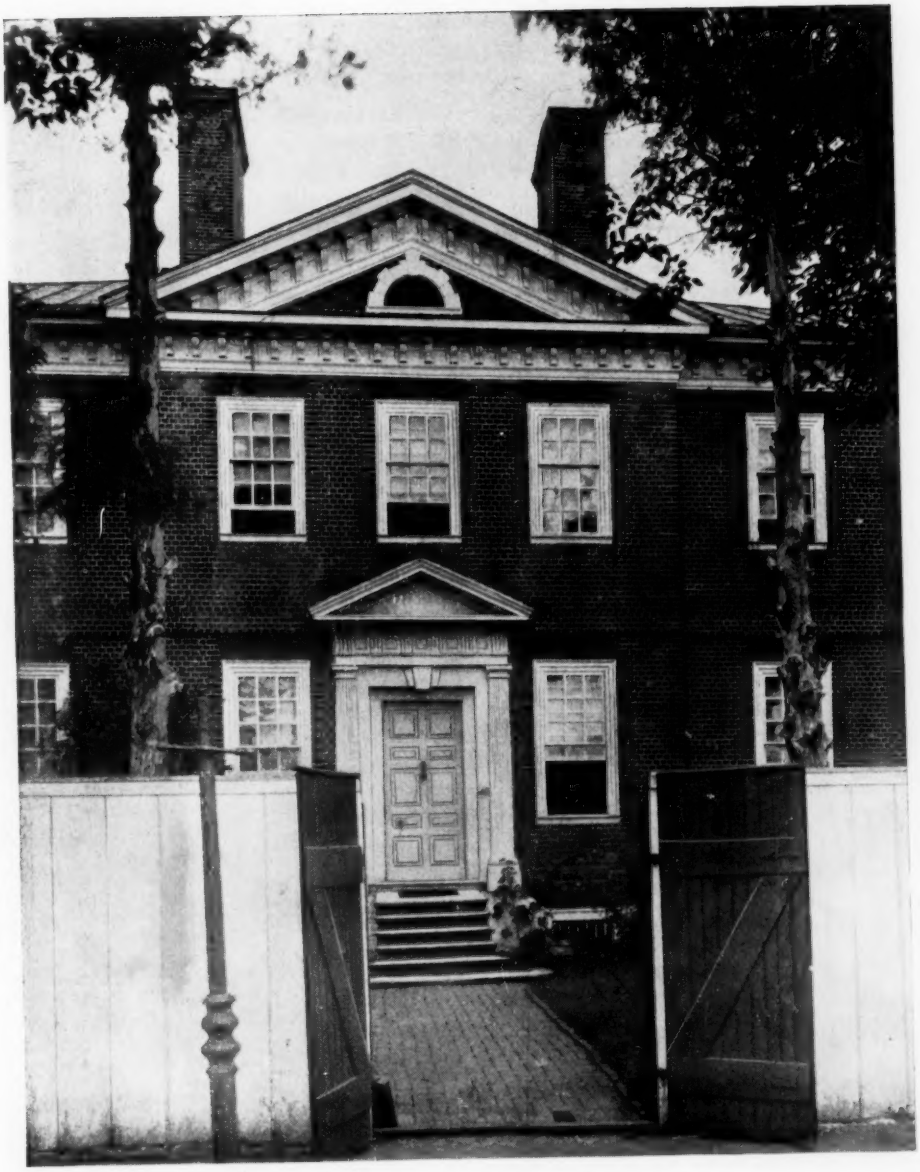

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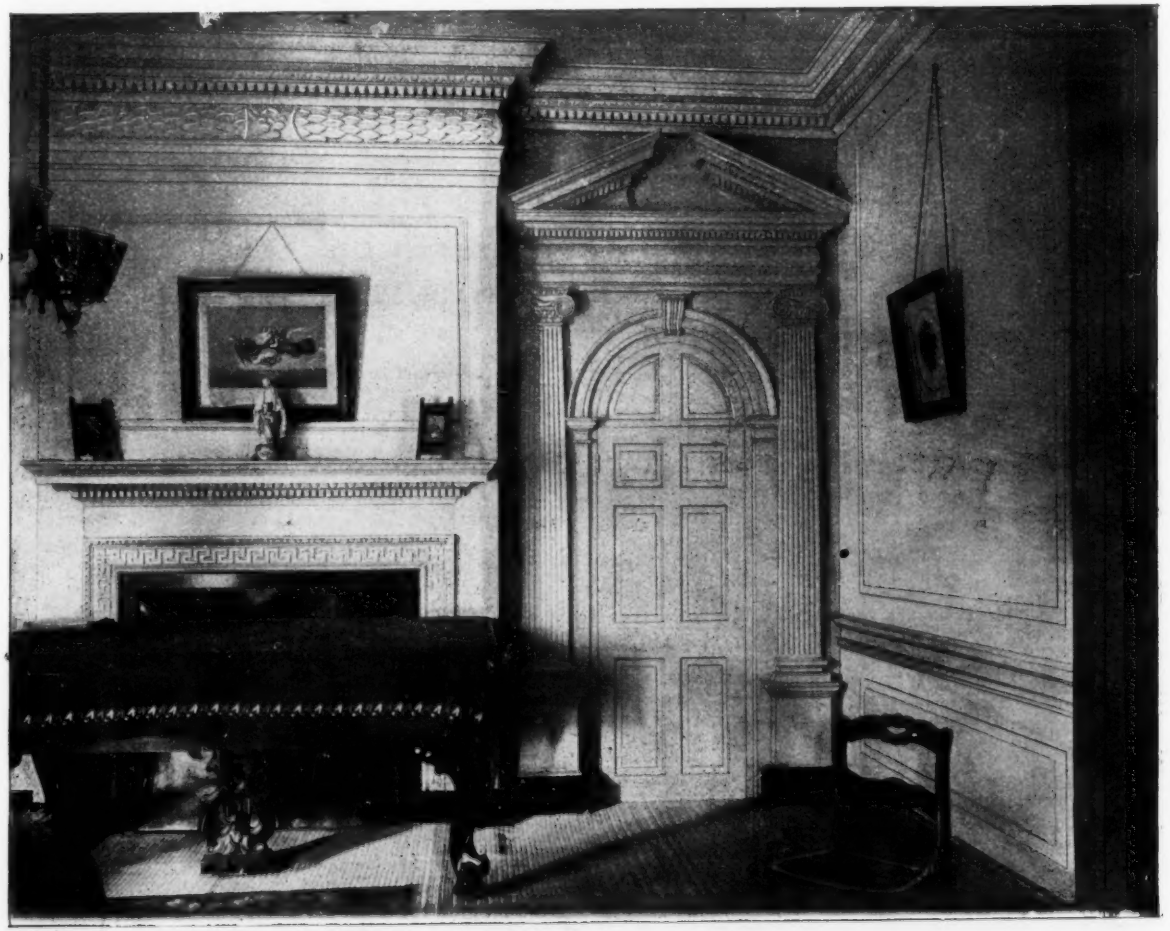

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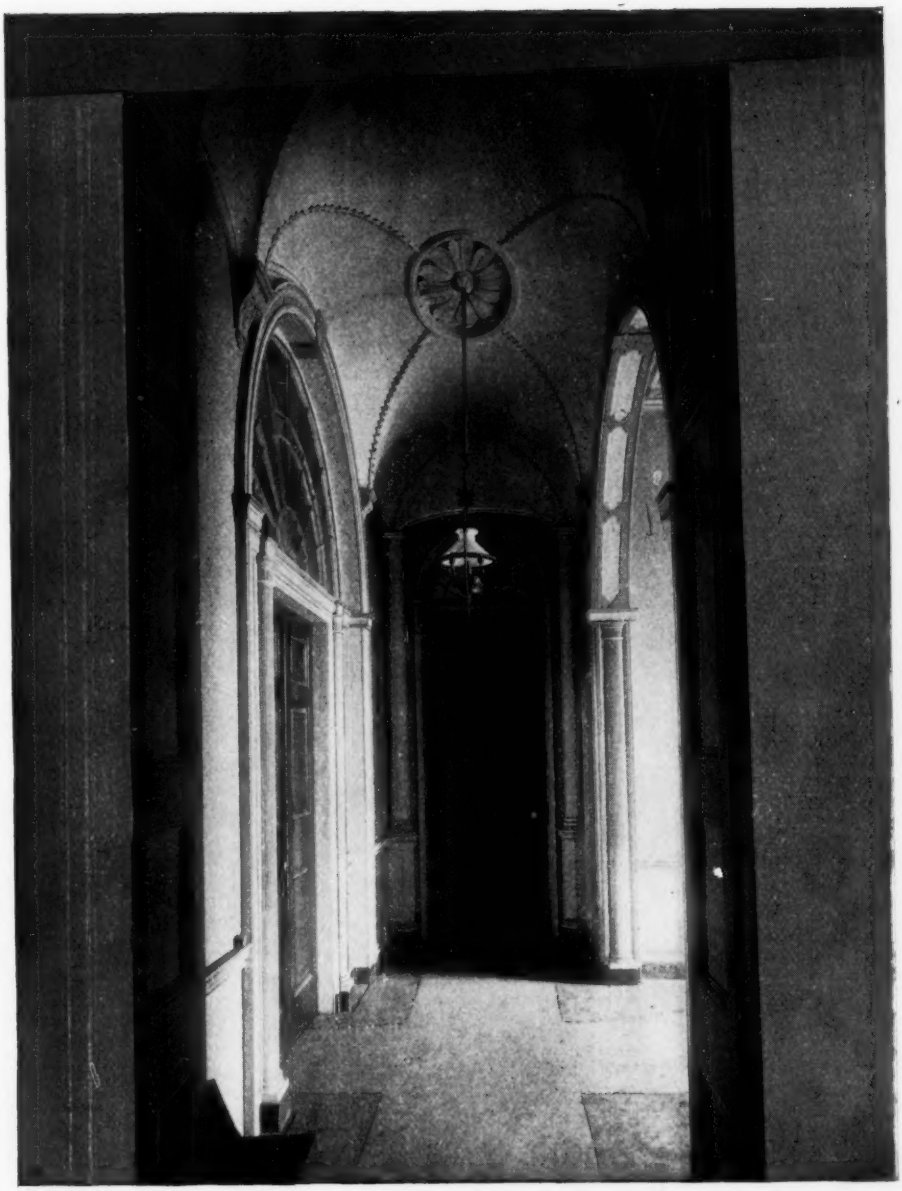

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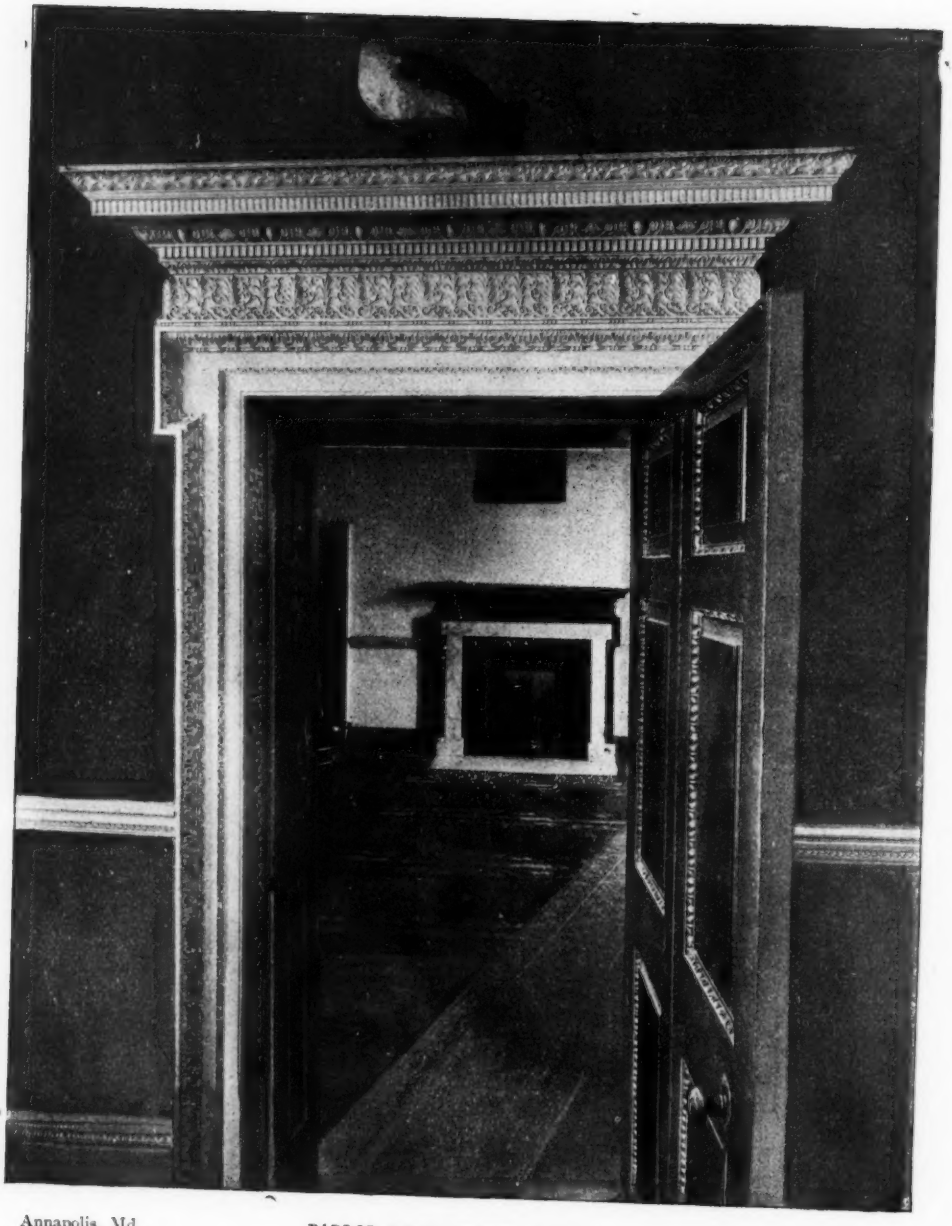

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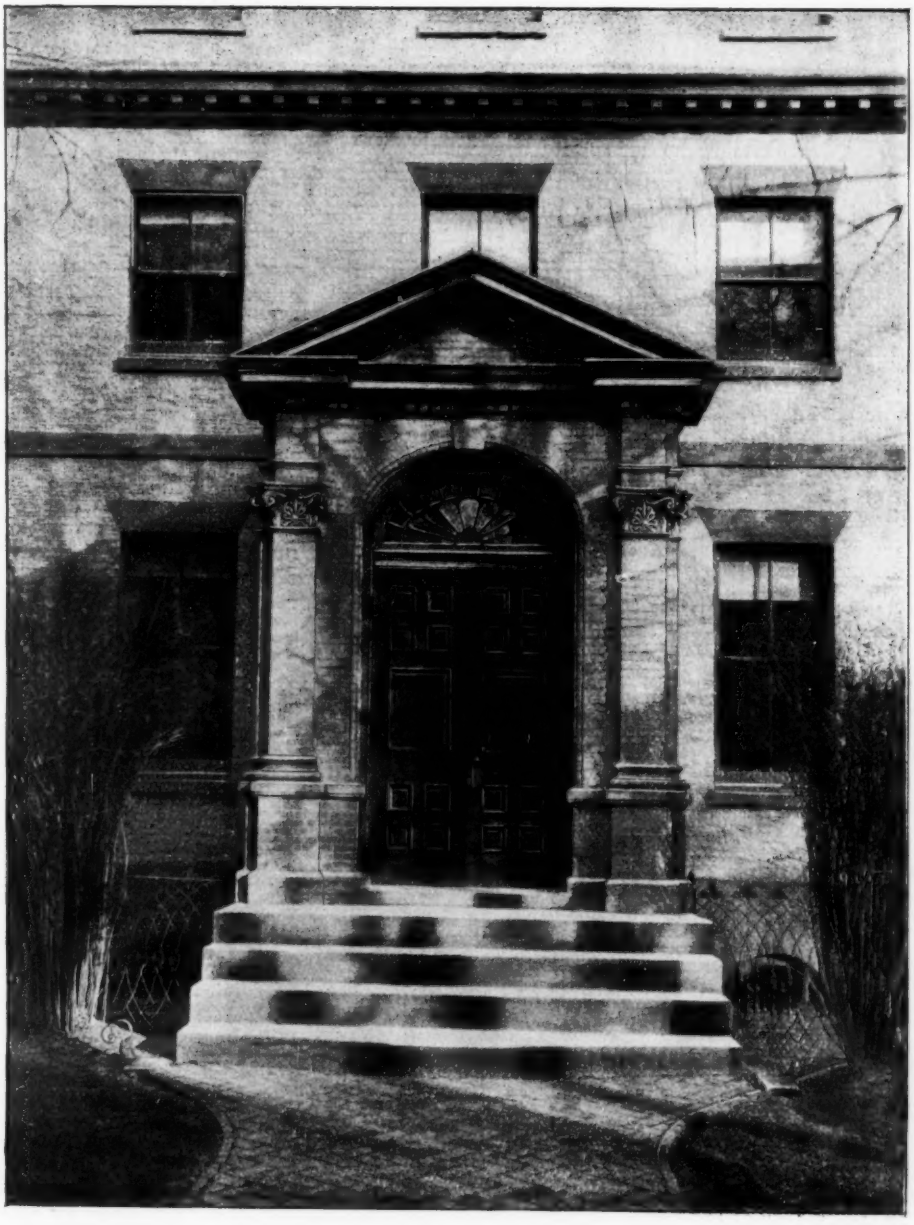

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The
Architectural Record.

VOL. III. APRIL-JUNE, 1894. No. 4.

THE ARCHITECT OF FASHION.

BEFORE proceeding to consider the architect of fashion and his influence upon current building, it is necessary to recognize that he is the product of his environment. He could not exist and flourish except in an anomalous condition of the art of architecture, such as now exists and has existed in Europe and America since the fifteenth century.

In the first place, it is only under the pressure of great civil, religious and social enthusiasm that a development of new ideas becomes possible, and only with the help of a poetical rendering can these ideas be materialized into human acts which call for architectural monuments which the technical skill of the architect can develop into works of art. The church, the state and society at large, are at this time engaged not so much in developing ideas as in discarding those that have become obsolete. We are in a state of transition, and just now very busy in tearing down, rather than in building up. Mentally we are given to science, to the observation of phenomena, and their recurrence. From these we learn the laws of nature, for the pure sake of knowledge. Some of us apply them to the material benefit of mankind.

If under these conditions monuments of the higher social, political and religious ideas are at present impossible, those embodying practical and material interests may be accurately defined and artistically developed in accordance with mechanical organic conditions. Exceptional efforts in this direction are made with more or less success. A respectable number of architects, both here and abroad, practice architecture as a living art. They compose architectural designs with reference to the uses and purposes of the building in hand and also with reference to the nature of the material used and to the mechanical conditions of structure. They certainly abstain from covering actual constructions with forms which represent impossible mechanical relations of matter, and also from copying forms of doubtful fitness, used elsewhere, merely because they seem picturesque.

The tendencies of the young architect who has received a good education are generally in the right direction. His ambition is to excel in his profession. He is devoted to his art and permits no motives of personal interest to swerve him from this great aim. That but few continue in this course for any length of time is attributable not entirely to the weakness of architectural human nature, but to the weakness of the human nature of clients as well. The commercial demand for architecture in this country and at this time is exceedingly great and the profession is interested in knowing definitely its nature and function, as understood by its patrons. Our patrons of art know architecture only as a commercial commodity, with which they are not otherwise familiar and which must be approached with due business caution. The business way

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of ascertaining the value of merchandise is to find out what the majority of people will pay for it. In the meantime one must not betray his ignorance, but gather information as he proceeds.

Let it be known that you wish to build anything whatever, and it is surprising how, without effort on your part, this sort of information flocks in upon you. Wherever you are, on 'Change, at your club, at board meeting, at your house, at your office, friends drop in on various errands, and one and all wind up by recommending some clever architect of their acquaintance. Direct applications for employment, personal and by letter, are not wanting. Architects of repute are known to send recommendations, references, testimonials and even sample drawings of their own manufacture. What is most gratifying to the patron in these personal visits of architects (which primarily seem a great bore) is the growing conviction that after all he knows more about architecture than he thought he did. He is told so in various forms. "His views betray great common sense," "it is surprising how they illustrate the motives of the early masters." "His suggestions are interesting as new problems in art." "It is delightful to converse with a client so well informed?" A future professional relation is anticipated with pleasure, and a resulting progress in art is confidently predicted.

As the patron of art acquires confidence in himself, he becomes more and more reconciled to the men who supply him with it. He talks of what he likes and dislikes and is assured that to follow the bent of his taste is the sure road to success. In the meantime, as a shrewd business man, he has made notes, and filed all papers and drawings, and finally renders his judgment in accordance with the preponderating weight of testimony in favor of some one applicant, yielding not a little to personal impressions produced by the candidate.

It is self-evident that a relation of architect and client thus initiated gives the lead to the client in the matter of art. The architect is not employed as are other professional men, to direct an enterprise involving questions of science and art by reason of his knowledge in the premises, but because he has already conceded his client's views to be perfect, and has assumed the position of a mere draughtsman to carry them out.

Now what are these views of the client? They are the feeble umbrageous impressions received by him from current architectural work, as far as he has observed it. He says, when he comes to think of it that this he likes, and that other he dislikes. Whatever you do, he says to his architect, or at least implies by his conversation, let it be not unlike this and not at all like the other. Nothing outside of current practice, no matter how good, is therefore admissible, and all the faults and errors of current practice are perpetuated. The greatest of these may be summed up by stating that the architectural forms of our time are conceived without reference to construction, and that the real construction is concealed by a false one, which in cases is in itself practically impossible.

This state of things has created the fashionable architect, the man who has the faculty of procuring himself to be talked about most, and who avoids architecture *per se* as a thing irrelevant to his business. The architect of fashion is he who aspires to be the fashionable architect. Like the modern politician, the architect of fashion has no convictions, but follows adroitly in the wake of public opinion. His aim is not to be a great architect, but to do a big architectural business, and in this he very often succeeds. Practice with him has in time developed even a positive dislike for architecture in the abstract, for whenever he has attempted it, in any degree, the result was disastrous from a business point of view.

To do justice to the architect of fashion, let us say here that he was not born so, nor is he consciously malicious or even cynical. He is shrewd enough to look after his material interests, and when he finds these inconsistent with the interests of architecture he drops architecture, rather than let the architecture drop him. Of course he has abandoned all claim

to immortality, to a statue in the Walhalla, or a niche in Westminster Abbey, but he enjoys life while it lasts as a highly respectable member of society belonging to the most fashionable clubs, and although at times he gets very tired of it all, because of the humiliation of constant drumming and the silent gnawing of his professional conscience, he has the consolation of success and feels sure of pre-eminence until supplanted by an architect, even more eminently fashionable.

To understand him thoroughly, we must permit him to speak for himself:

"Your talk of Architecture as a living art is most delightful, and reminds me of Kugler, Lubke and Viollet-le-Duc and old Ungewitter; but it is not practical. Everybody admires it, but nobody wants it. My interpretation of Architecture as a living art is an art by which an architect can live. When I was young and enthusiastic and all that sort of thing, I procured with much labor an introduction to A. X., the great life insurance president, a dignified old gentleman, who received me in his office after waiting an hour and a-half in an outer room. He listened to me over his shoulder while I stood behind his big arm chair, as he had not offered me a seat, and I repeated with much trepidation a well-considered brief lecture on architecture.

"When I had finished, there was a a pause of a minute or two, during which he read over twice an open letter he held in his hand; then he turned, with an evident effort to be amiable as far as his rooted dignity would permit, and said: 'Young man, my friend in this letter speaks of you in very high terms as a promising young architect. I dare say you talked art to him as you did just now to me. It sounds well and is apt to impose on persons less familiar with the subject than I am. Architecture, my dear fellow, is not a living art. Greek Architecture died before Christ, and Gothic Architecture before the Reformation, and that is the reason why we need architects well versed in art history to design our buildings. If, as you say, it were a living art, then any one could do it. Good morning, sir.'

"Now that I am older I know better. I never talk architecture to my clients. When a man is engaged in building a house or a store or a bank, his mind is naturally preoccupied. He doesn't want to be bored with architecture. Besides, between you and me, of what earthly use is architecture to an architect? Let me tell you it is a hindrance to success. What a man of business wants to know is that you can do the thing you undertake to do well and promptly, and the only way to convince him of that is to tell him so. For instance: After listening attentively to the wants of my client I say modestly, 'I believe, Sir, that I now have your views regarding the building, yet I cannot be quite sure of that. You have matured the matter in your own mind. To me many of the features are quite new though intensely interesting. I must ask you to grant me another interview, perhaps two or three after I have commenced plotting it out on paper. When I have fully mastered the subject as you have, then the work will go on rapidly. I do not expect to succeed with a first sketch nor a second nor a third or perhaps a tenth. I throw them off at the rate of two or three in a day, and reject all until I am satisfied. When once satisfied, however, I am sure you will have a design as near perfect as the human mind can produce. I then put from ten to twenty draughtsmen and two or three clerks upon it at once, and in two weeks from now we can proceed with the building. I need only six months to build it in. I can do it in five if need be. A client of mine said to a mutual friend of ours 'what I like in him is his promptness. He knows what he is about, and he tells you at once what he can do and what he can't do.'"

As to style, "The Architect of Fashion" continues: "It is wisdom to confine yourself to the vernacular. It is the only idiom which is popularly understood; not exactly understood, but, I should say, tolerated by public opinion. Ever since the beginning of the sixteenth century, say nearly during the last four hundred years, the bulk of the architecture of the civilized world has been Renaissance in style. When

men feed upon a steady diet physically or mentally for twelve successive generations the race acquires a taste for it. Not because it has analyzed its hygienic or intellectual properties, and has found them adapted to its physical or mental needs, but because the digestive apparatus has become incapable of assimilating other matter. Of course, you will tell me all about the revival of mediæval architecture during the last half century. You will point to the great achievements of Scott and Street, of Schmidt and Hansen, of Viollet-le-Duc and Gaertner and many others. You will speak of the restoration of the cathedrals, of Munich, the modern Romanesque City, of the Gothic work done in London and Vienna, and even in this country, but I will tell you that during all this last half century the bulk of the architectural work done, say nine-tenths of it or more, has been Renaissance. The pioneers of the revival of mediæval art are passing away one after another, and there are no successors to fill their places, mainly because the movement has not been a popular success. As for myself I prefer to rely upon the great majority for a supply of clients, and as clients go they pay well, and are not exacting, provided you humor their notions and recognize their good taste, and that is only human nature after all."

Thus speaks the architect of fashion, and thus he acts. It is desirable to know what becomes of architecture under his manangement, and incidentally how it affects the architect. To dispose of the latter first in as few words as possible; it seems clear that the architect is rapidly descending from his high professional position and ranging himself with that class of mercantile enterprise which, having no confidence in intrinsic merit and real usefulness to society, seeks recognition by drumming and advertising. The lawyer, physician, clergyman, engineer, yes, even the mason, carpenter and horseshoer, claim to have acquired a knowledge of the theory and practice of their respective vocations which is not shared by the public, and tacitly deny the right of their clients to decide upon the methods and means to be used in carrying out the work intrusted to them.

The Architect of Fashion defines his position somewhat as follows: "Architecture," he says, "is a science as far as it relates to mere building, and an art in clothing the building in certain forms. The latter is a matter of taste, and the architect being an artist is presumably possessed of a large share of this taste, but in as much as the forms of architectural monuments are determined for us by architects of past periods, and cannot now be changed, and as furthermore our clients have a preference for certain architectural styles, it is but reasonable to admit public taste as co-ordinate with that of the architect."

There are those who assert that there is a logical relation between construction and the development of form, which is not a mere matter of taste or convention, but one of scientific demonstration. But the moment the architect of fashion admits this argument he practically denies his client's influence in the premises, and risks the loss of his patronage. By ranging on the side of the public, clients are prepossessed in his favor, and the number of his competitors is reduced to those who prefer business to professional convictions.

When to the architect is given the privilege of exhibiting his work on the corners of streets, on the highways and public places of the world, he can well afford to wait for recognition of his merit without advertising or personal drumming, unless, indeed, he has lost faith in his own work or in the intelligence of the public.

The architect of fashion *has* lost faith in the intelligence of the public. "They don't like Shakespeare," he says, "so I give them variations upon 'Potter of Texas.' Variations because they don't like 'Potter of Texas,' pure and simple for any length of time. They want something new; some marked change, but the change again must be in the style of 'Potter of Texas.'" So last year we had the Italian Renaissance with a decided feeling of the Colonial. What is the Colonial? Why the carpenter's interpretation of the

Renaissance as expressed in wood during the seventeenth and eighteenth centuries, delicate moldings hardly practicable in stone, decorations and carvings with just a touch of relief, for in the Colonial times much of this work was done in putty. It takes very well, for most people hate things decided either in form or color. Still they got tired of it, so this year they longed for something vigorous, and we treat the lower stories of our buildings with aggressive rudeness, rough stone ashlar, small openings, great iron gratings in front of them and above we continue with the Colonial Renaissance. The contrast is striking. Next year, no doubt, we will have to go in for the Rococo, the latest phase of the Renaissance in France and Germany. It is elaborate, and doubtless will take on that account. Yet some of our most fashionable architects are of opinion that the early Renaissance of the Italian school, plain walls, bulged ashlar, openings far apart, small and plain in treatment, will be the leading style. They say that Boston is already prepared for it, and if it succeeds there Chicago is sure to follow. New York, however, is more conservative. There is a strong talk here of a return to the Grecian of the Treasury Building and the Custom House (the old Merchants' Exchange in Wall street), and if that tide sets in in time, it may save that building from being demolished. Queen Ann, it is now agreed, is dead, and past the possibility of another revival.

Bold innovations, such as piling up quarry-faced stone, grotto fashion, exaggerated by pitching off the edges so as to produce a projection from the bed of six or eight inches, huge arches with immense voussoirs and no abutment to mention, enormous entrance doors extending to the full height of the building, are striking features of no artistic merit, quickly appreciated and admired and as quickly cast aside. Thus the architect of fashion maintains a well-stocked repertory of striking architectural forms; striking, because most frequently gathered from periods of architectural decay, and also of heterogeneous building material, loud in color and contrast and peculiar in form and texture. From these he compounds combinations which constitute the fashion of the day.

Considered from a business point of view it saves much time. Once the leading draughtsman of the office is informed of the annual change, office work takes care of itself.

The old method of spending weeks and months in designing in the seclusion of one's library is utterly impracticable with the modern business habits of the architect of fashion. Two or three hours in the morning must suffice for office work, which consists mainly in receiving prospective clients, in brief and rapid interviews with clerks of the works, in signing certificates for payments to builders and dictating a few letters generally directed to hurrying delinquent work, for the architect of fashion must maintain a high reputation for doing work promptly and rapidly. The afternoons and evenings are devoted to social intercourse with probable clients who are visited at their offices, met on 'Change, in banks and insurance buildings, and later at clubs, receptions and public meetings.

The architect of fashion is ubiquitous. His problem is to procure new orders—jobs, as he calls them—and to this he devotes all his time and energies.

Now, let us turn to architecture to see how she fares under the rule of the fashionable architect. Architecture has ceased to be an art and has become a business, a fashionable business carried on by business methods on business principles.

The chief of the business, the Architect, no longer pretends to be a man of learning, of varied attainments, of a liberal education, of studious habits, retiring, modest, shrinking from contact with the world, devoted solely to his art. No, he is a man of business, a man who startles the world by his bold combinations of architectural bric-a-brac.

It is said of Worth, the great French artist in female garments, that he will contract to make a fine dress for a few hundred francs, but for a few thousands he will produce what he calls a dream. The fashionable architect also

deals in dreams in architectural inspirations, combinations of fancy; hence he is a genius, too, a genius *a la mode*, like Worth.

Art, in the general acceptation of the term, is the skill (technical knowledge and mechanical facility, the results of study and practice) by means of which man is enabled to create organisms, or represent them in matter in imitation of nature. Fine art means the creation or representation in matter of organisms which express an idea.

Raphael's "Madona,' Thorwaldson's "Apostles," Dante's "Inferno," the cathedrals of the thirteenth century, Bach's "Oratorios;" all these are works of fine art. They express in painting, sculpture, music, poetry and architecture the Christian idea of religion. Similar instances may be cited of the various fine arts of Greece and Rome.

It is not fine art to copy any one of these works or to combine parts of them into one whole. For instance, a series of quotations from various poets, though it may bear upon the expression of an idea and may even be a meritorious literary effort, is not a work of fine art. The same applies to architecture. To copy a building or to combine features of various buildings, no matter how meritorious the originals, is not in any sense a work of fine art.

The fashionable architect not only copies buildings as a whole, which, by the way, is not the worst of his sins, but he combines features of various buildings into what he calls a design. More than this, he decides beforehand what particular features he intends to combine for the next year or two for use in all buildings without reference to their nature or materials. Theatres, academies, club houses and banks are all built after these models of fashion.

For instance, during the fifteenth and early in the sixteenth century the palaces of Florence, like the Strozzi, Riccardi, Ruccellai and others, had high basements above the street level devoted to domestic offices and servants' quarters, which basements were lighted on the street with small square windows, the sills of which are from eight to sixteen feet above the floor.

Now there was a very good reason for this. The feuds and factions of families were very warm in Florence in those days, and the palaces had to be fortified against popular risings. No such necessity exists with us at the present time, yet we see many specimens of basements of the kind, of which the small windows are besides protected on the outside with heavy iron gratings.

The portico of the Greek temple consists of columns supporting an entablature and cornice, upon which rests the gable or pediment. The cornice is the covering of the structure, its protection against the weather, hence its projection. The entablature is the lintel which sustains the cornice and the superincumbent pediment between the columns. If for the colonnade we substitute a wall the entablature becomes superfluous, and the magnitude of the cornice, although accepted as proper in a temple and perhaps also in a palace, should doubtless be reduced in secular structure, both in height and in projection. We observe this to be the case, not only in the earliest Roman domestic structures, but also in the Basilicas. Renaissance architecture, as derived from Vitruvius and his expounders of the fifteenth century, maintains the cornice and entablature as an indivisible whole whether sustained at intervals or continuously by a wall and by columns. Moreover, this crowning feature is introduced at every story, with a full projection of cornice, as though it were the top of the building.

The architect of fashion accepts these forms as of good authority, and adopts them in his combinations. More than this, he is swayed by motives of habit, otherwise tending in opposite direction. During what is termed the colonial period, cornices and entablature were made of wood, and attenuated accordingly. The subsequent invention of the zinc cornice enabled ambitious architects to indulge in exaggerated cornices at a moderate cost. The architect of fashion builds his cornices of stone, but vacillates between

the meagre colonial and the exuberant zinc in their form and magnitudes.

When art is the result of logical reasoning, errors are gradually corrected; when it is only a matter of fashion, errors in one direction are superseded by errors in the opposite direction.

Dress is by fashion designed independently of the needs of the human figure. The architecture of fashion also means aggregation of forms, independent of the purposes of the building, its construction and material.

A modern building in the City of New York, intended to be let for offices, came under my observation recently. Two stories of this building are absolutely useless for the purpose, because the windows are exceedingly small (square in one of the stories and round in the other), and in both cases placed 5 feet above the floor. Upon inquiry, I was told that the architectural exigences of the structure required this arrangement. This is a striking illustration of the superstition of the fashionable architect that architecture is independent of the uses and purposes of the structure to be designed, that a design is to be a mere aggregation of architectural features arbitrarily combined by force of genius and not at all constructively developed from the environment, use, position and material.

The painter of portraits, skilled in his art, adroitly engages his sitter in conversation until he hits upon the subject of greatest interest to him which brings out an animated expression of his favorite ideas. This expression he endeavors to depict upon his canvas. He finds it to be elusive, consisting as it does of peculiarly modified lights and shades. The portrait, perhaps, looks cunning, while the painter desires it to look wise. Finally he hits upon it. A certain high light of very small dimensions is modified by a minute dot of gray and the cunning man looks wise.

The lights and shades of the human face and figure are the result of modification of the muscles, which in their turn are affected by nervous action originating in the brain, the seat of thought and ideas. Architecture is the art of celebrating human ideas in the monuments it creates. The architect, unlike the painter, cannot hope to apprehend them in a model. He must study their organic developments by means of mechanical relations which constitute the nervous system of a building. He must recreate with the help of nature's laws, as the Greeks and the masters of the middle ages recreated before him. When science has furnished him with forms, he must model, decorate and color these forms in accord with the laws of construction. To do all this successfully, he must be the master of his work, not the slave of a layman's crude conception of what ought to be. This means professional independence, ample time for study, love of the art, and devotion to it first of all without regard to mere business interests.

The methods of the architect of fashion lead to the opposite of all this, hence he has become one of the most pronounced and prominent of the obstacles to the progress of architecture.

Leopold Eidlitz.

ARCHITECTS' HOUSES.

Part III.

JUST before the plastering is done the iron drainage and waste pipes are put in place, to be afterward connected with the fixtures — the basins, tubs and such, that will be used. If these iron pipes are to be concealed inside the partitions they are put up before even the lathing is done, between the partition studs and the floor beams, and this is the usual way; but it is much better to put them on the outside of the partitions, in full view, except where they pass through the floors. When this is done they are best put up after the brown plastering is done and before the white finishing coat of plaster is applied, as the rough plumbing is a dirty work at the best, and will reduce white plastering to black plastering in a very short space of time. The reason why the pipes are better exposed, is because it is so easy in case of a suspected defect to apply the usual tests for leaks, the peppermint test or the hydrostatic test, both of which, we will assume, you know all about, and will not enlarge upon just now.

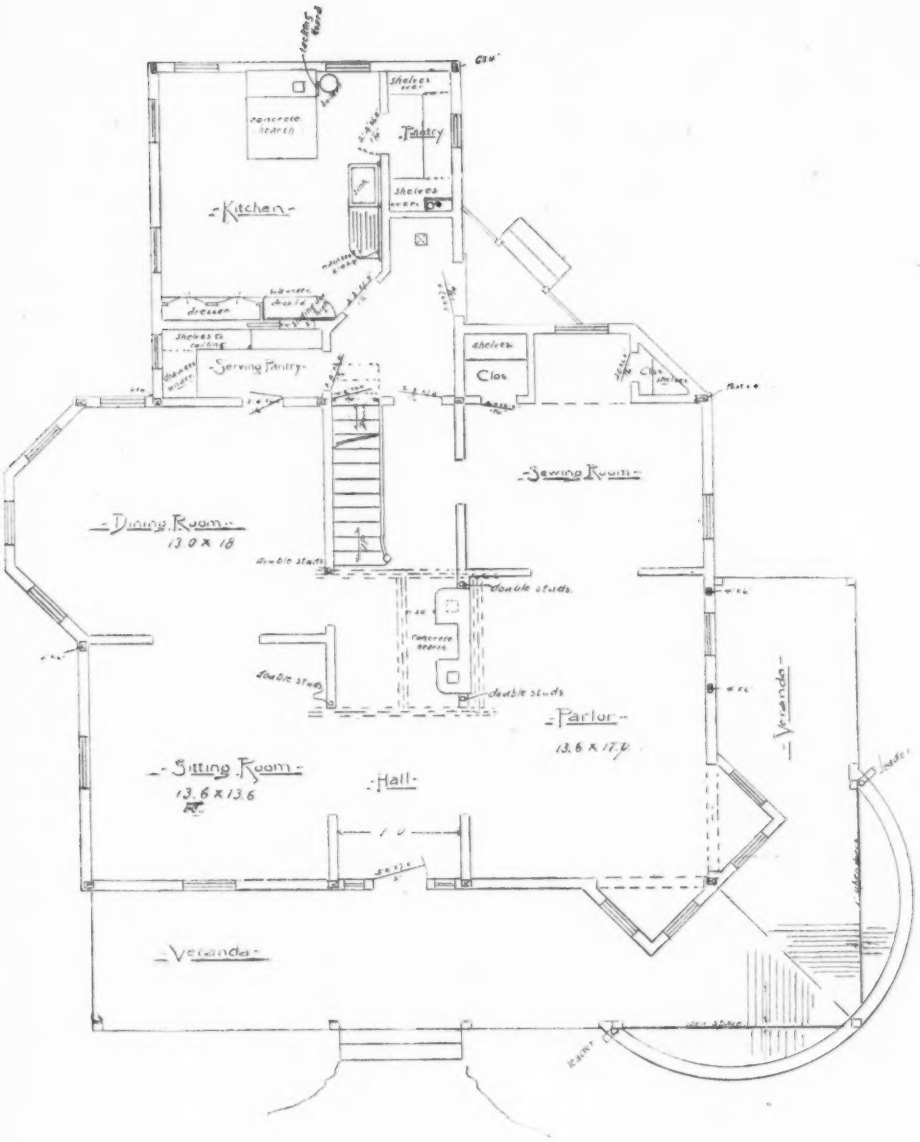
These iron pipes are usually of cast-iron, and the makers have attained a wonderful skill in the manufacture of them in casting them as thin as possible; about an eighth of an inch is the standard thickness, and it is quite enough if—and it is a very large if—if the casting is uniform and free from sandholes. In the best plumbing, what is called "extra heavy" pipe, about a quarter of an inch thick, is used, and is a good thing to use everywhere, but you will have to pay for it.

Quite the most important of the recent improvements in house drainage consists of carrying the main drain pipe all the way to the top of the house and out through the roof. That this is an improvement everybody is agreed, and it is easy to see how it is so. It affords an opportunity for the bacteria-laden exhalations from sewer or cesspool to escape by an easy path, diminishing the chances of their escape into the rooms, and it prevents the siphoning of the traps to a great extent. Beyond this gen-

Lake Hopatcong, N. J. SOUTH ELEVATION OF RESIDENCE FOR LEONARD PFEIFFER, ESQ. H. S. Ihnen, Architect.

Lake Hopatcong, N. J. NORTH ELEVATION OF RESIDENCE FOR LEONARD PFEIFFER, ESQ. H. S. Ihnen, Architect.

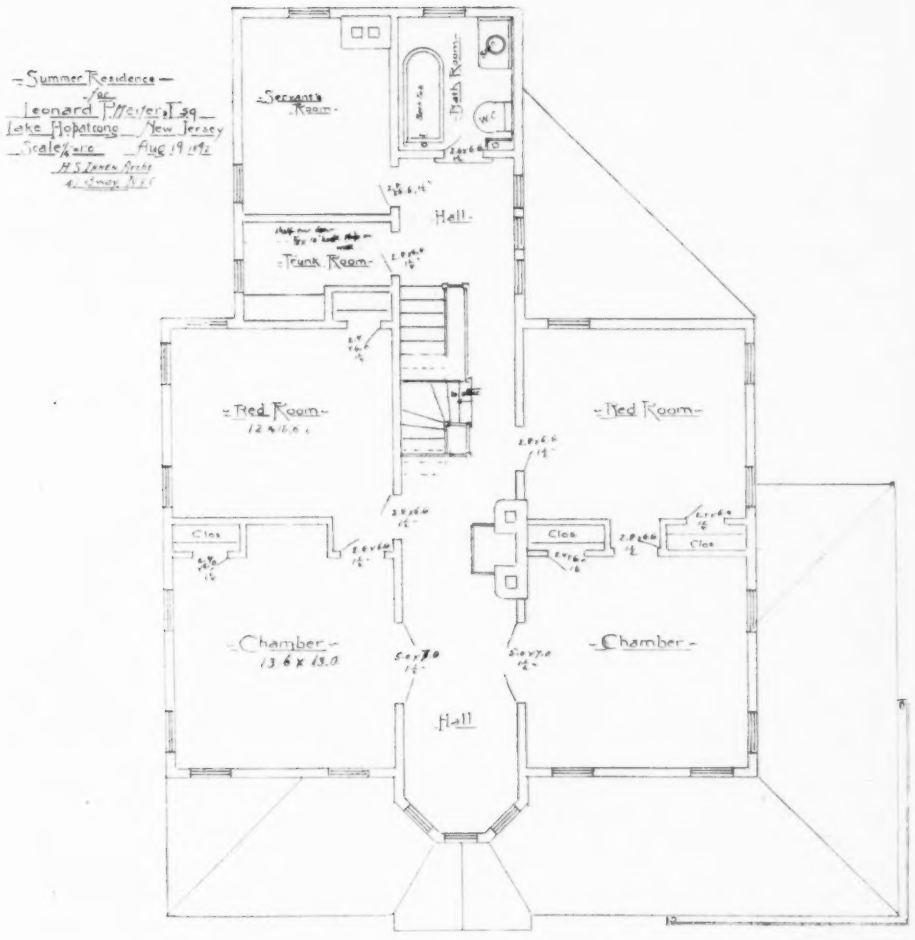
Lake Hopatcong, N. J. WEST ELEVATION OF RESIDENCE FOR LEONARD PFEIFFER, ESQ. H. S. Ihnen, Architect.



First Story Plan

FLOOR PLAN OF RESIDENCE FOR LEONARD PFEIFFER, ESQ.

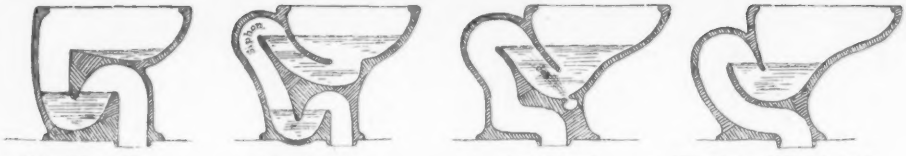
Lake Hopatcong, N. J. H. S. Ihnen, Architect.



Second Story Plan

FLOOR PLAN OF RESIDENCE FOR LEONARD PFEIFFER, ESQ.

Lake Hopatcong, N. J. H. S. Ihnen, Architect.



WASHOUT CLOSET. SIPHON CLOSET. JET CLOSET. PEDESTAL HOPPER CLOSET.

The illustration shows the four principal types which have supplanted the older kinds. These new types are usually made all in one piece of solid porcelain, arranged to hold the water in a bend in the outlet in such a way as to prevent the issue of foul gases, and they differ among themselves chiefly in the methods of causing the necessary flow of water. They all differ, however, from the older ones, in that they have not the complicated and imperfect mechanism formerly in vogue.

eral approval of the open-end waste pipe, however, authorities differ. Whether we shall have a main house trap or none, foot ventilation or none, trap ventilation or improved unsiphonable traps is a matter of dispute among the authorities. In New York City work there is no choice. The Board of Health, or rather now the Department of Buildings, lays down rules which require this and that and the other, without possibility of experiment or improvement. Their system may be the best, when I am under compulsion I have no opinion, but it is very much the most costly method devisable, and when I am free, as in the case of country work, to have an opinion, I regard it as very objectionable.

The objections to it are fully and ably stated in J Pickering Putnam's book, "Principles of House Drainage."

Briefly, it may be said that even if carried out in an ideally perfect way, it would be a clumsy, roundabout and unscientific method of reaching the end in view.

When it comes to the fixtures we have no longer to struggle with unsolved scientific conundrums; not at least to so great an extent. Our trouble is from another source entirely; it is, I am tempted to say, from an *embarras de richesse*, but that is so hackneyed—such a lot to choose from, is the bald English of it.

Go into any large manufactory of plumbing fixtures and you will find a row of about twenty water-closets, for example, each of which the salesman who knows his business will stoutly maintain is the best, and all of which probably are very good.

But here you have an array of back outlet and front outlet and side outlet, round bowl and square bowl, all porcelain, porcelain and iron and all enameled iron, two-pipe siphon, one-pipe siphon, jet, washout and hopper closets, with still more uncatalogueable modifications and improvements by each manufacturer, until we take refuge in tossing up a cent for a choice.

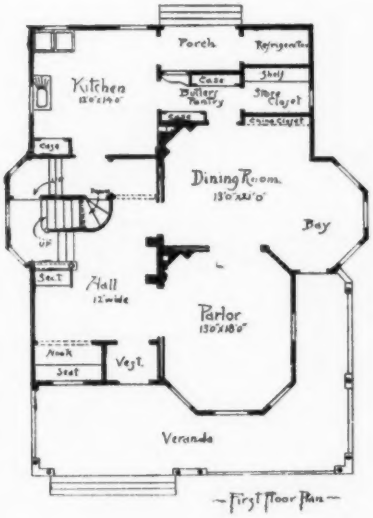
Probably the best is some form of siphon closet or the jet closet, with a jet of water entering at the bottom of the trap. I know of no better illustration of the efficacy of liberty and competition in reaching a given end than the rapid improvement in plumbing fixtures that has occurred since the matter was brought to people's notice.

Next to water-closets come baths, and here the choice is easier. The all porcelain bath, costing a trifle of $300, with carved marble claw feet, at $75 apiece, such I have put into very costly jobs of plumbing, are not quite available for the ordinary house. No more is the aluminium bath, the latest thing out, in trade slang, and costing about as much as the porcelain. The most available bath for ordinary good work is without doubt the enameled cast-iron tub, standing on its own legs, and not inclosed with woodwork; have the outside and legs painted with some of the patent enamel paints, or with ordinary white paint with a glossy finish, and you will have about as satisfactory an arrangement as need be desired. If cost is an important consideration, beware of indulging in over-elaborate cocks and waste stoppers. These are made in great variety, and some of them cost as much as, or more, than the bath proper. Whatever you choose, nickel-plated is the proper finish. Both plain brass and silver plated are very difficult to keep bright, without continual and laborious attention; nickel-plate almost takes care of itself.

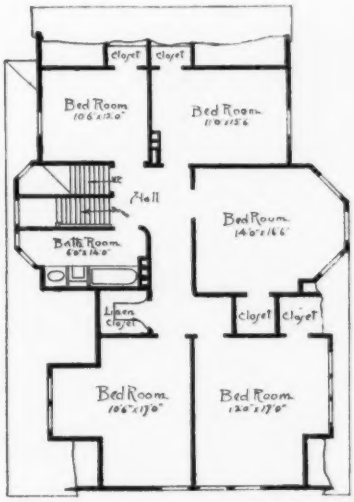
Besides the cast-iron enameled tub there are various other types in the

House for F.A. Nichols Esq.
—AT— ARLINGTON—N.J.—

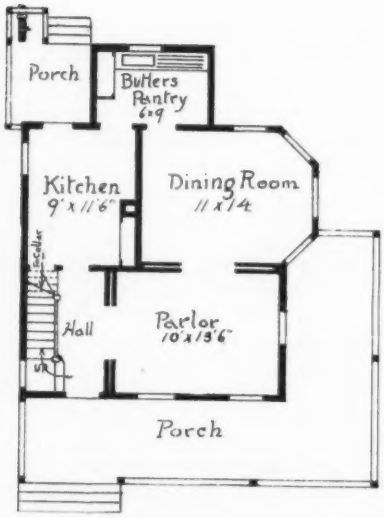
Manly & Cutter Archts.
—18—BROADWAY—NY CITY—



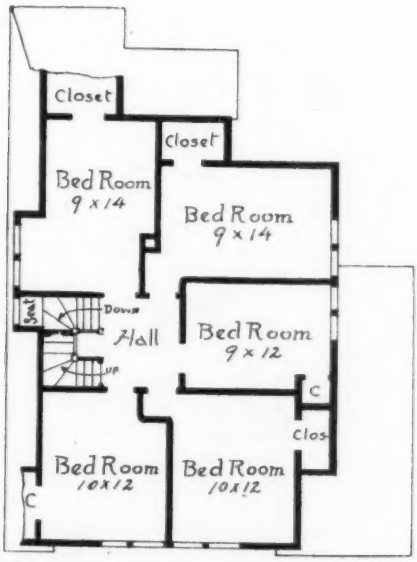
—First Floor Plan—



—Second Floor Plan—



First Floor Plan



Second Floor Plan

RESIDENCE.

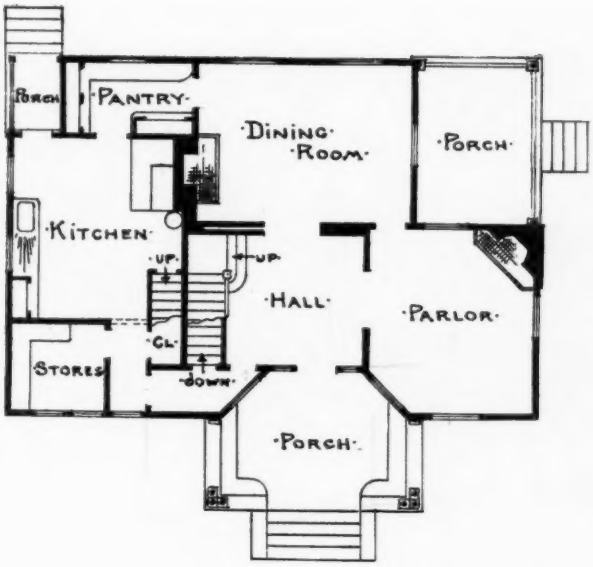
Manly N. Cutter, Architect.

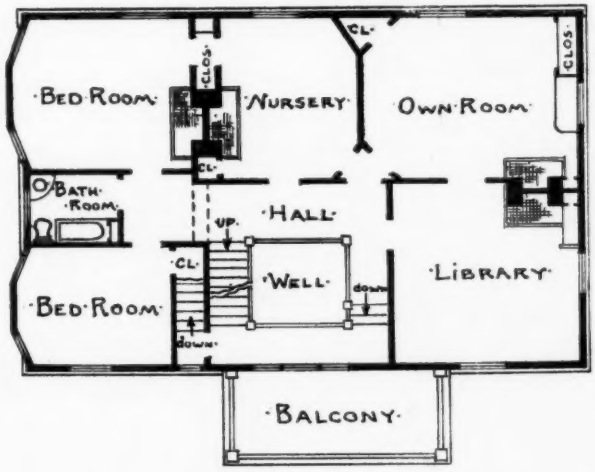
RESIDENCE. Rossiter & Wright, Architects.

South Orange, N. J. RESIDENCE. Rossiter & Wright, Architects.

Glen Ridge, N. J. RESIDENCE. Wilbur S. Knowles, Architect.

Glen Ridge, N. J. ENTRANCE TO RESIDENCE. Wilbur S. Knowles, Architect.





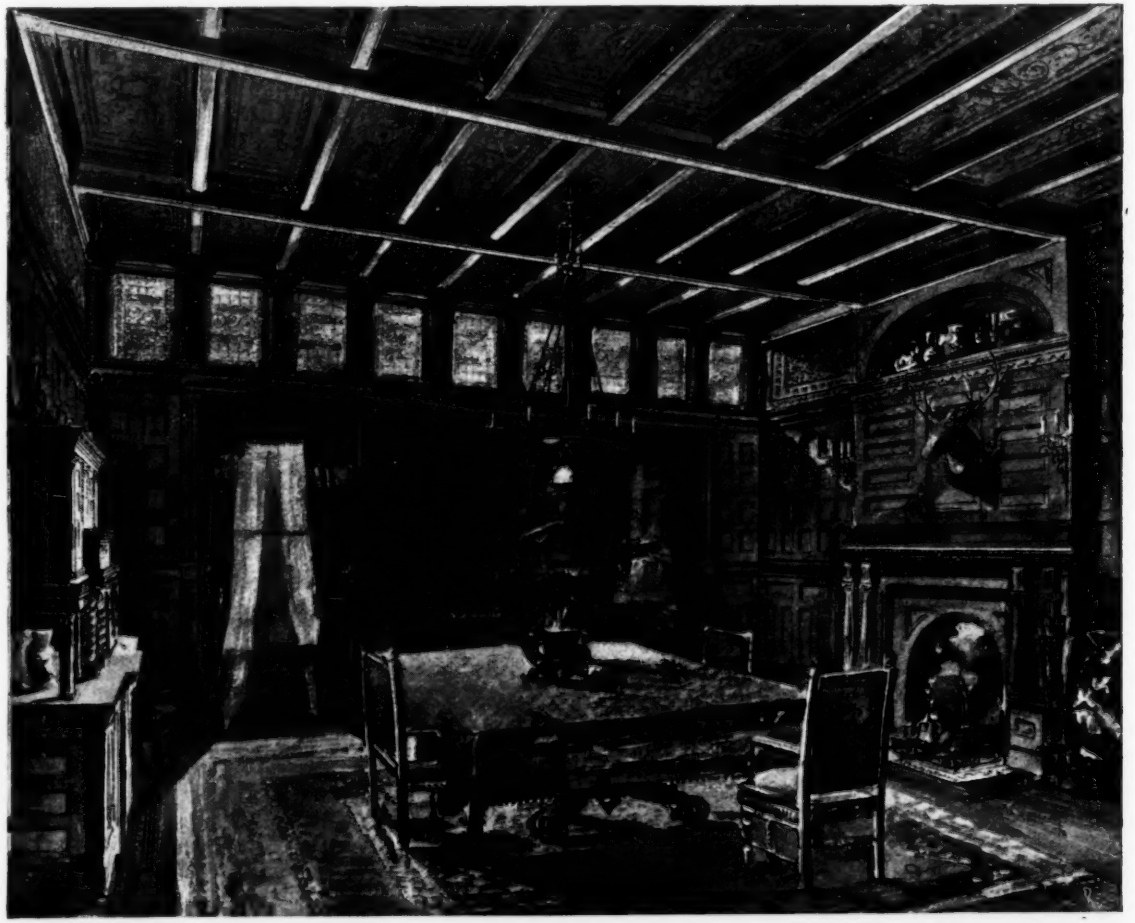
FLOOR PLANS OF RESIDENCE.

Glen Ridge, N. J. Wilbur S. Knowles, Architect.

Brooklyn, N. Y. HALLWAY. Charles P. H. Gilbert, Architect.

Brooklyn, N. Y. RECEPTION HALL. M. W. Morris, Architect.

New Hamburgh, N. Y. HALLWAY IN RESIDENCE OF MRS. LENOX BANKS. Thomas Nash, Architect.



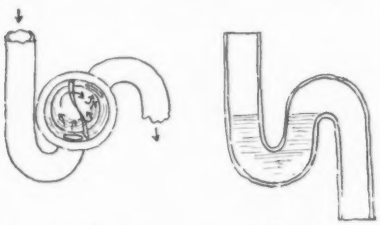
A DINING-ROOM. J. R. Thomas, Architect.

market, the old-fashioned, but still much used copper tub, which is always the cheapest and serves very fairly, and a new cast-iron tub lined with copper, which is sold at a lower price than the same tub enameled inside would be, and appears to be a good invention, though for appearance at least, and I am inclined to think for durability, I should choose the enameled kind. Recently brought out, too, are tubs of the same material as so-called paper pails are made of; indurated fibre is the magniloquent trade name; but I fear these have insuperable faults, although I have never used them, have been afraid to, you know how the pails go, as soon as the slightest crevice occurs in the outside paint, such I should apprehend would be the fate of the baths.

About wash-bowls there is little that need be said; the briefest mention is sufficient. One thing—don't inclose them with wood, with a closet underneath. Let them have legs or brackets and stand quite open, showing the pipes and all underneath, ugly though they be, for polished brass we are not going to spend our substance upon in this instance.

So about wash-tubs and sinks and all the rest, we might go into the most minute criticism, but it is really hardly necessary, let us dismiss them with but the name.

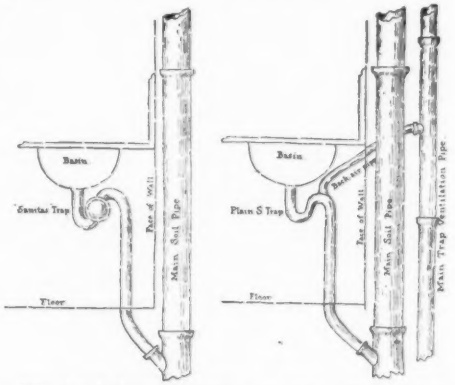
Under all of these fixtures there must be what are called traps, not mouse-traps, but an arrangement to prevent the gases from the drains escaping into the rooms. It is upon this question of traps that the discussions of sanitarians centre. One way to do is to run a pipe from each trap to a vertical pipe, which itself runs to the open air above the roof. This is called the vent pipe, and the arrangement is called venting the traps, a curious instance of inversion of sense by a mere mechanical accident of language. The proper word is ventilate, but ventilate and ventilation being long words to write, and especially to print upon drawings and diagrams, the contraction vent came to be used. Now a vent is a place to let air out, while the particular business of these ventilating pipes is to let air in.



"SANITAS" TRAP. "S" TRAP.

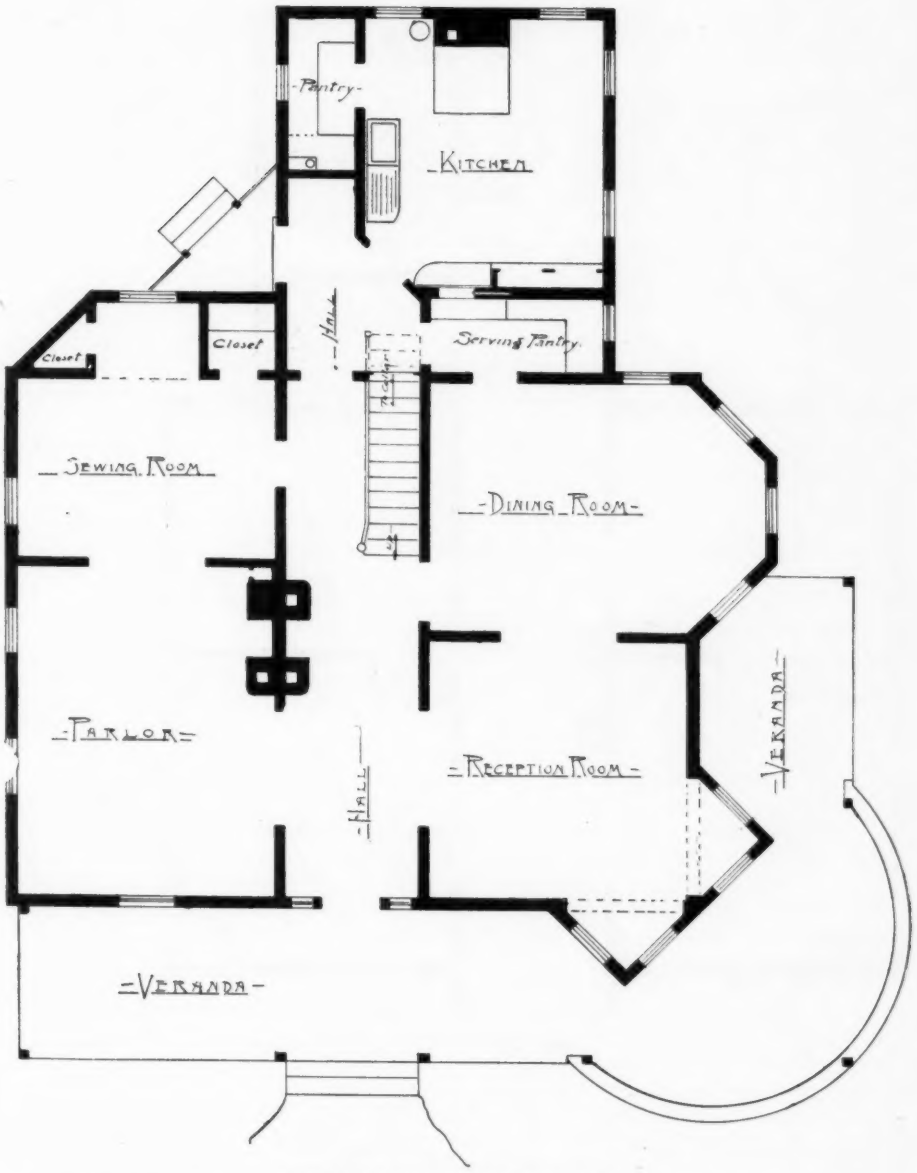
The sketch shows an ordinary S-trap, as it is called—a mere bend in the pipe, as it were, where the water lies and prevents the bad air in the pipes returning into the room. The trouble is that the pipe is apt to act as a siphon and draw the water quite through instead of letting it stay in the bend as it is shown, besides other defects which the books will tell of at length. The Sanitas trap is hard to show in a drawing.

The whole business I believe to be a blunder. The only reasonable thing to do is to devise some kind of a trap which shall need no such absurd appendages for proper working. Such a trap is the "Sanitas" trap, and I have always used it in country work with perfect results; possibly there may be others as good, although I do not know of any. Use this by all means, if you are outside the jurisdiction of tyrannical boards, under all fixtures, except, of course, the water-closets, which are traps unto themselves. Paint the traps and the pipes white or some other color, and a very sightly and reasonably inexpensive result is obtainable.



The sketch shows two basins, otherwise alike fitted up, the one with a "Sanitas" trap, the other with a "backaired" S-trap. The difficulty of reaching the air-pipe is great, and the complication increases when three or four fixtures are involved, as is shown in Mr. Putnam's book before alluded to.

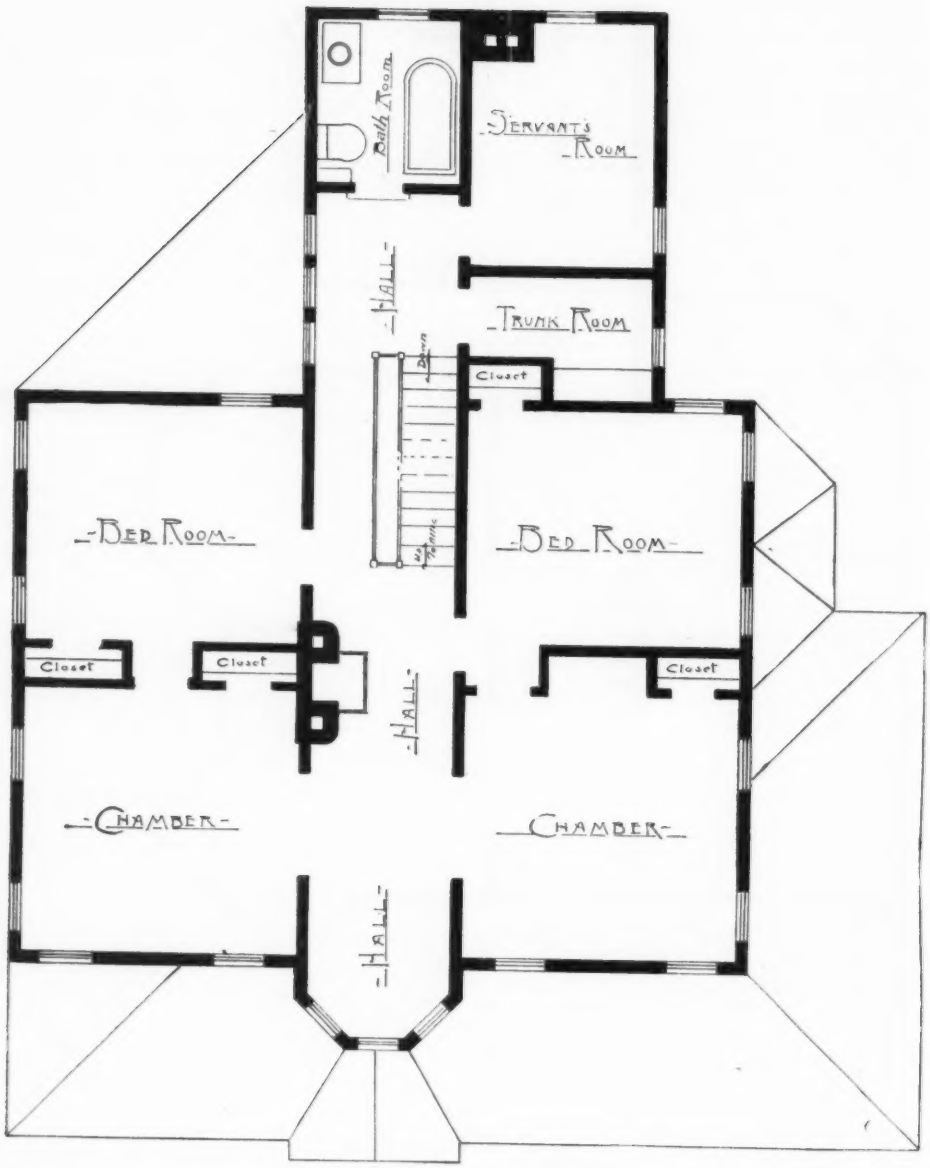
It may be noted that the use of galvanized iron for supply pipes has increased much within a few years. While formerly it was thought needful to have lead pipe for an ordinary job of plumb-



RESIDENCE OF G. F. LAWRIF, ESQ.

* Atlantic Highlands, N. J.

Manly N. Cutter, Architect.



Atlantic Highlands, N. J.

RESIDENCE OF G. F. LAWRIE, ESQ.

Manly N. Cutter, Architect.

ing, now in some of the best work galvanized iron is used. No doubt in time it does rust, and the first flow of water is more or less discolored, but beyond this slight drawback the galvanized pipes seem to have no disadvantage; on the contrary, in many points they excel the leaden ones. First of all there is no insidious source of poisoning in the zinc galvanizing as there is in the lead; secondly, being of a uniform thickness there is not the perennial doubt as to whether lighter weight pipes have not been put in than were intended; for it is a matter of very delicate gauging to distinguish the different grades of lead pipe by their outside measurements. In the third place there is much less danger that the strong iron will give way under frost or violence than the fragile lead; especially from rats' teeth or stray nail points are iron pipes secure. So galvanized iron it is now, except for the superfine work where polished brass pipes are used, which require shekels in abundance, not only from the cost of brass, which ought not to be so much, but from the difficulty of making bends and of manipulation generally, and the careful and delicate handling that such easily-marred material demands.

The drainage of a country house is unfortunately apt to reduce itself to a question of cesspools. Sewers are bad enough; our whole system of water carriage of refuse, ending by depositing it in the bed of lake or sea, may be destined to fertilize continents that shall hereafter rise to be inhabited by our descendants ten thousand years from now, but is certainly not adapted to benefit ourselves now in the slightest degree. The whole thing is radically wrong, manifestly and admittedly a mistake, yet so tied to us by custom, by legislation, by easy availability of appliances, that it would be a task inconceivable to rid ourselves of it. Yet something was done at the Chicago Fair in the way of burning the refuse that I could wish were universally accepted.

Still, sewers must be taken for the present as established facts, or where sewers are lacking, and they usually are lacking in the country, the unsavory cesspool seems often the only resource. Moreover, I am bound to say that any immediate bad result from the use of cesspools is not observable, where the water supply is through pipes from an uncontaminated source. The real danger lies rather in the concurrent use of wells and cesspools, which are apt to play exchangeable parts, the pump drawing the foulness of the cesspool and the drain discharging through a roundabout course into the well, to the detriment of all concerned.

But if you have a good water supply a cesspool may be made the best of by making two cesspools, one water-tight, with cemented bottom and sides, the other for the first to overflow into, for the liquid part, that is, to overflow into and soak away.

Beside the plumbing pipes there are other pipes to be built in before plastering, hot air pipes, namely, if hot-air furnaces or indirect steam is to be used for heating. These are flattened tin pipes, of familiar appearance and in a frame house they are fastened in place in the partitions between the studs with wire. The lath over these pipes must be of iron, and the pipes must not be allowed to come too near any woodwork of studding or floors, not nearer, let us say, than three inches, and all woodwork exposed to the direct radiation from the pipe is usually covered with tin tacked on.

One of the difficulties about these pipes lies in the lack of skill or of care of local mechanics, whose part it usually is to provide the pipes and the sheet-iron case for the furnace, only the heating apparatus proper being bought from the manufacturer. Naturally the local man has little interest in getting the best results from a given furnace, even if he has the necessary skill. Sometimes the studs of the partitions will be placed flatwise and the pipe-maker will make his pipes only two inches across to suit the studs, an entirely unsuitable and inefficient shape for a pipe, which is the better the nearer it approaches a circle in section. Sometimes the pipes will be accidentally mashed from lack of inside stays or in spite of them, and will be built

into the walls in their mashed condition, although the flow of warm air is cut off by the stricture as if by a valve.

The choice of suitable heating apparatus is a difficult one: four systems at once present themselves, the regulation hot air furnace, direct steam, indirect steam and the more recent hot water heating—more recent, at least, in this part of the country, for in Canada hot water has long been in use.

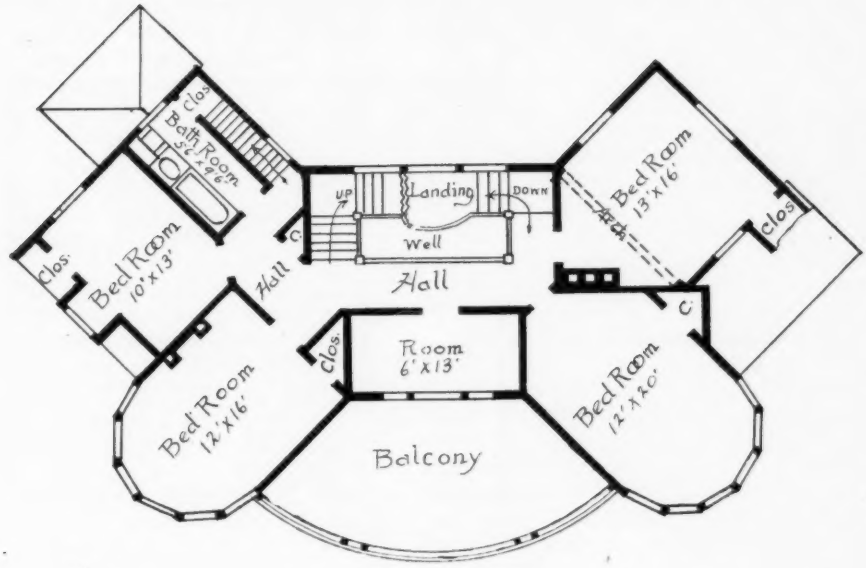
Of these four each has its advantages and disadvantages, a platitudinous remark, doubtless, but always to be borne in mind in house building; the best arrangement has its faults. The hot air furnace properly used is far from being the monster that it is sometimes represented. On the contrary, it has the great merit of furnishing a continual supply of fresh air. In a compact house and where cost is an important consideration it is perhaps the best that can be adopted. The really difficult matter with hot air furnaces is the heating of distant points if the house be of too great extent or of a straggling plan; in these cases more than one furnace must be used or a different system adopted.

Mantelpiece by W. S. Knowles, Architect.

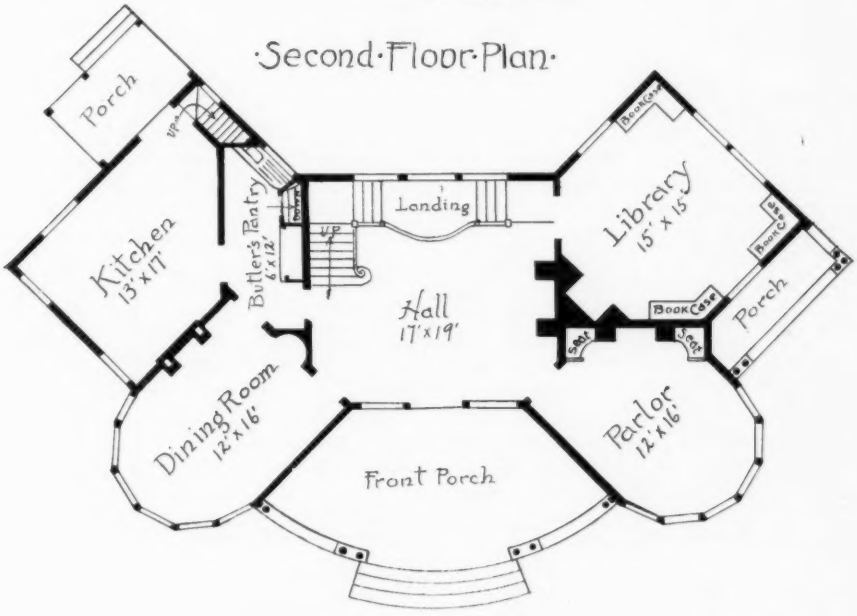
Long pipes or contracted pipes are as far as possible to be avoided. This consideration usually makes it necessary to put the registers at the sides of the rooms farthest from the windows. It would be better if the hot air could be admitted near the windows, but to do this requires an array of long pipes in the cellar radiating from the central furnace to the extreme boundaries of the wall, and I have known the complete failure of such a layout. Another matter that requires care is the admission of fresh air to the furnace. In calm weather the ordinary cold air conduit made of boards works well enough. The difficulty occurs when the wind blows, and the harder it blows the more trouble it gives. If the wind blows strongly against the cold air inlet it sends a cold blast from the registers which there has not been time to warm as it passed the furnace; if on the other hand the wind blows strongly in the opposite direction, so that the cold air inlet is to leeward, or even if it blow hard athwart the inlet the tendency is to exhaust the air from the furnace and to prevent any from passing through the registers.

The strength of this exhaust suction is more than might be supposed. I have repeatedly seen casement windows on the leeward side, and even interior doors slammed shut when a violent gust caused the sudden expansion of the body of air in the house. The most efficacious remedy is to put the furnace in a small room by itself, separated from the rest of the cellar by brick walls and with a window of its own. This constitutes a cold air chamber in which the furnace stands and from which it draws its supply, the trouble from wind pressure reduced to almost nothing. I have also obtained good results from opening the cold air inlet under a lattice-inclosed piazza, the lattice openings being very small, so that the wind was strained through it, so to speak, and its direct force broken.

I cannot let the matter of hot-air heating pass before alluding to what

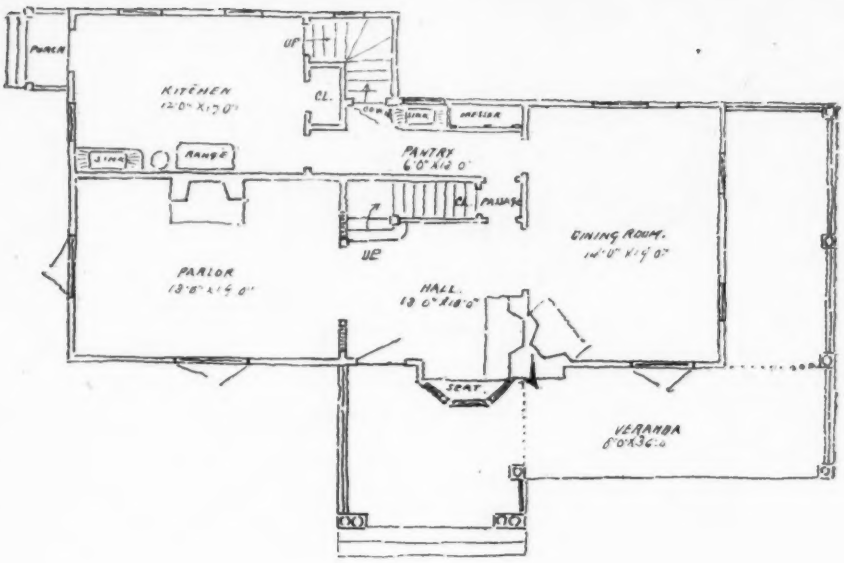


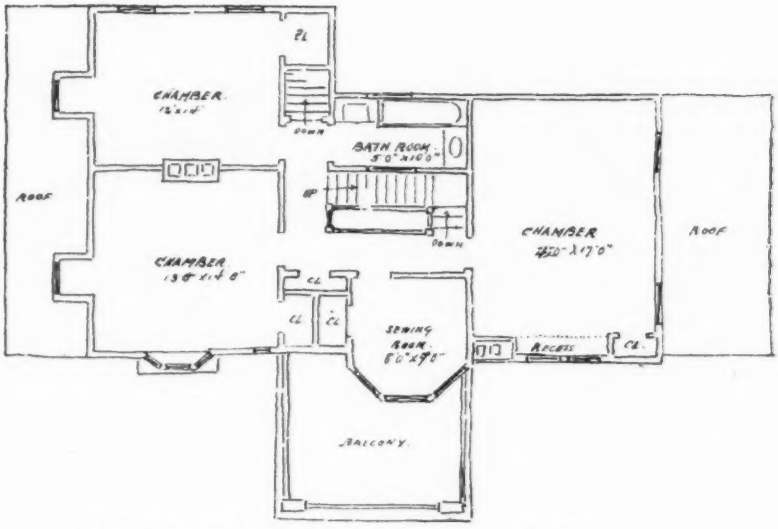
·Second·Floor·Plan·



·First·Floor·Plan·

RESIDENCE. Manly N. Cutter, Architect.





FLOOR PLANS OF RESIDENCE DESIGNED BY F. W. BEALL.

are called ventilating grates. These are made so as to warm a current of air just as a furnace does, in addition to the radiant heat that a grate naturally gives, and used in a hall fireplace one of them will temper the whole of a moderate sized house in the cooling weather of autumn.

Steam heat with radiators in the rooms is little used for dwellings, for country houses hardly at all. It seems to have more objectionable points and fewer advantages than any other system. It is of far greater first cost than a furnace; it is difficult to regulate, being apt to make the house over hot in mild weather and to decline to act when its services are really required.

Indirect steam heat, on the other hand, is a well-nigh perfect system, having all the advantages of a hot air furnace without its drawbacks; only the first cost is high, about thrice that of hot-air, or half as much again as direct steam radiation.

Hot water has many advantages. The first cost is somewhat greater than even indirect steam, but the cost of fuel is the least of any system. It is extremely manageable, being used from Canada to Florida and adaptable to all climates, simply because warm water is warm, while warm steam is not steam at all, but must be at least boiling hot, The serious defect is the lack of fresh air supply and a minor matter is the bulkiness of the radiators required.

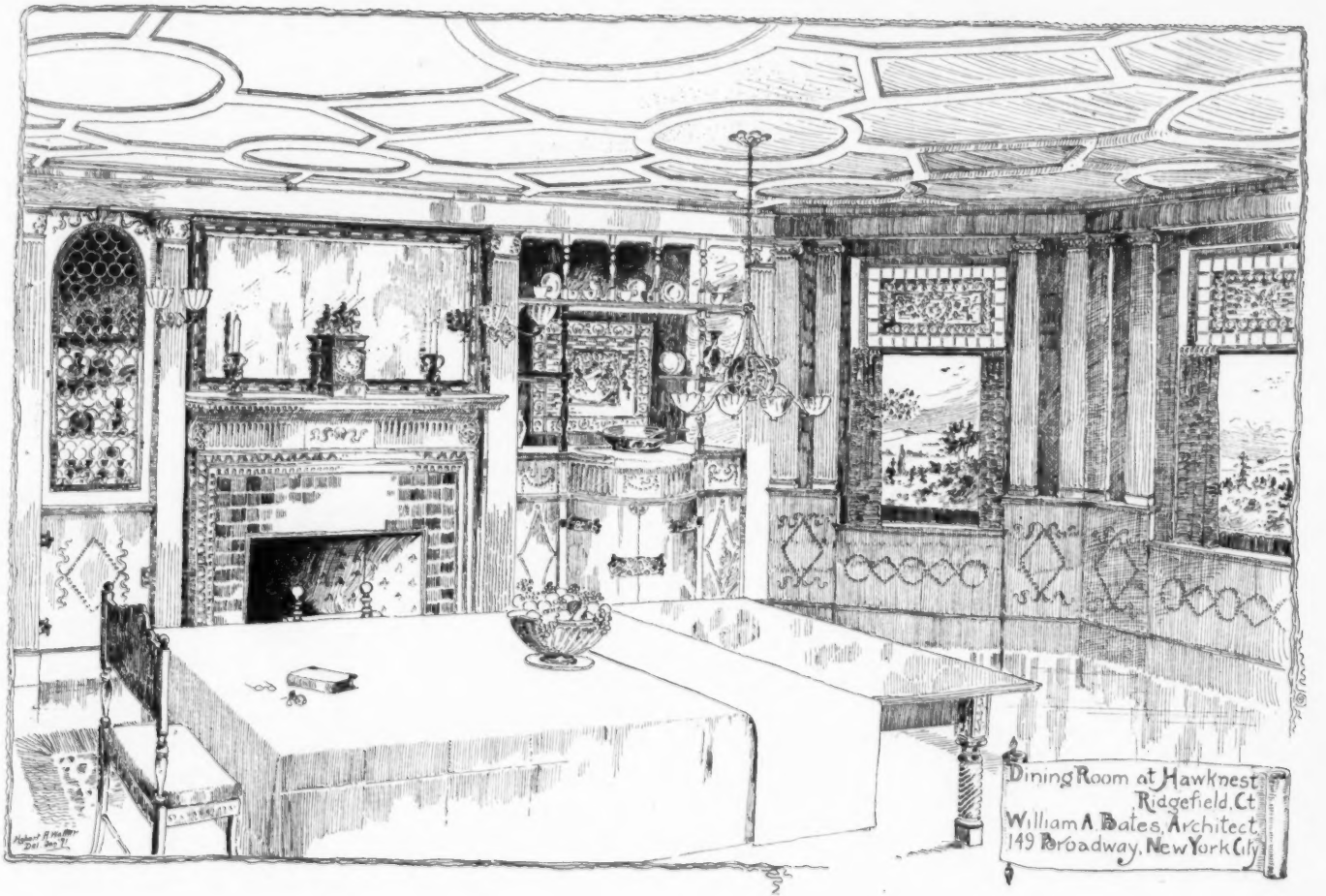
Upon the whole, I prefer a well-installed hot-air furnace, from a maker of established reputation, for ordinary country houses, the pattern being of less consequence than the excellence of the workmanship, which is best secured by dealing with makers of well-known and high standing.

All these matters of plumbing and heating being settled and the preparations made at the proper time, and many other matters, such as gas pipes, electric wires or conduits, speaking tubes and bell-work not forgotten, the plastering has covered up most of this mechanism, leaving the whole inside of our house a sheet of monotonous white, a doorless and windowless desert, clear for the work of putting on the standing finish.

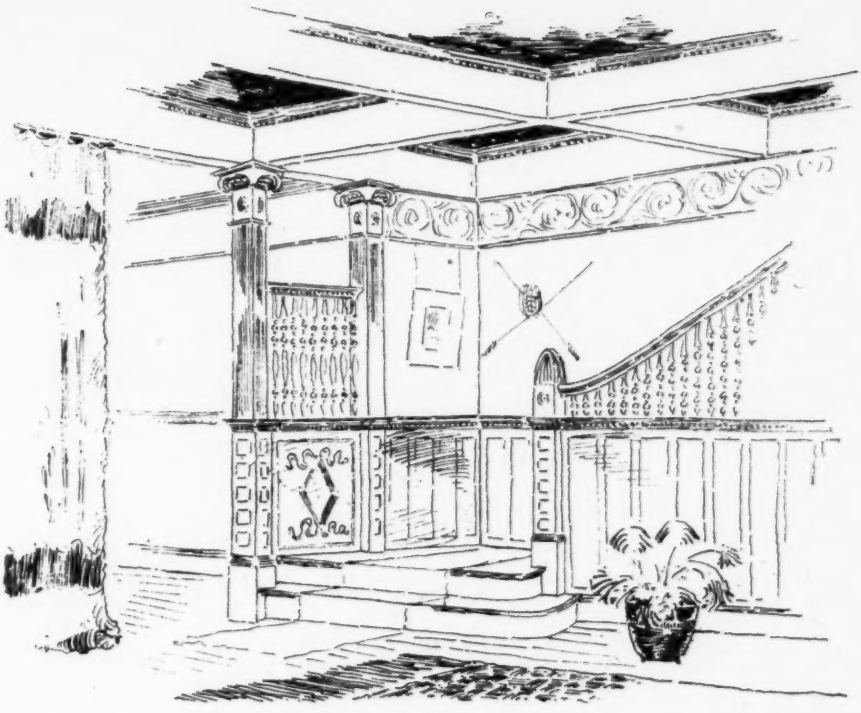
This is the comprehensive term that includes the visible woodwork of the interior that is nailed in place. The borders around doors and windows, architraves they are called, the baseboard around the walls at the floor, the wainscot and chair rails and picture mouldings. All of these come in the form of moulded strips from the moulding mill and are sawed off to the right lengths on the spot and nailed in place by the carpenters.

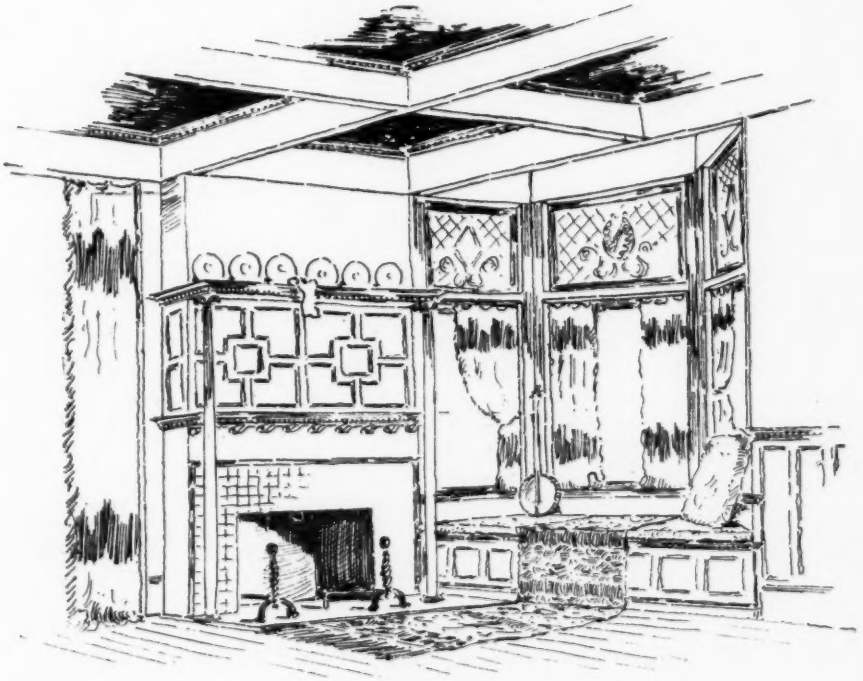
What kind of wood to use is the first question, and the first broad distinction is between a painted finish and a hardwood finish. For real beauty, that which would delight a painter's eye, choose the last by all means. But hardwood at its best suits not the prevalent taste for having everything spick-and-span, neat and new and polished. Hardwood at its best is hardwood, stout and dark with age only, not with stains, oiled, not polished, and as much improved as stonework itself by weather stains and wear. I may plead in vain, we admire and applaud the old woodwork; go and do likewise, we will not.

Of what hardwood we will have there is not so much to be said for it in preference to paint, in fact good paint is better than poor hardwood, hardwood always being taken to mean natural wood, varnished or polished, finished bright, as they say on shipboard, not taking account of its actual hardness or softness. But if paint is to be used anything is preferable to the ordinary thing, the commonplace whites and greys and grainings. Some beautiful interiors I have made by painting the woodwork of each room a different color, keeping all in the same tone, dark and rich Indian reds, deep blues and greens and strong French ochres, or softer tones of terra cotta, olive and citrine. But if bright finish—the nautical term is convenient—if bright finish is required there is a wide range to choose from. There is nothing better than oak, from the ordinary native oak, white or red, to the costly English pollard oak, and in addition to oak there is cherry of about the same cost, mahogany which is much more expensive and ash which is much

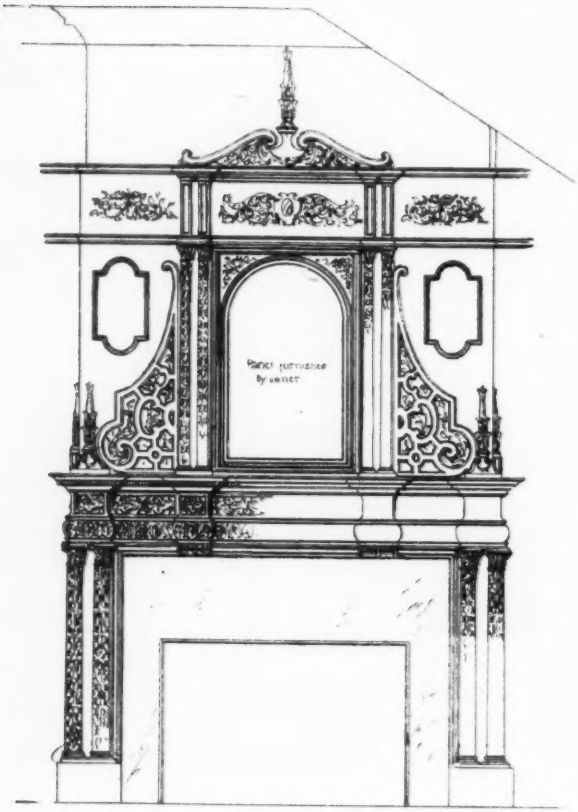


Dining Room at Hawknest
Ridgefield, Ct.
William A. Bates, Architect
149 Broadway, New York City

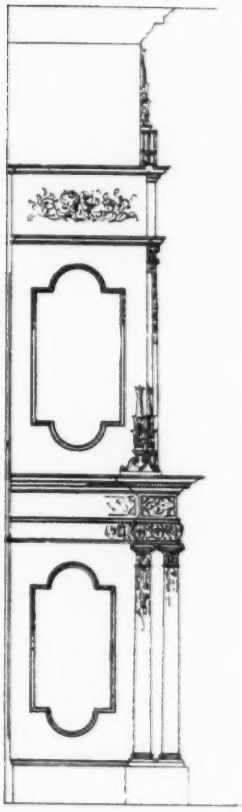




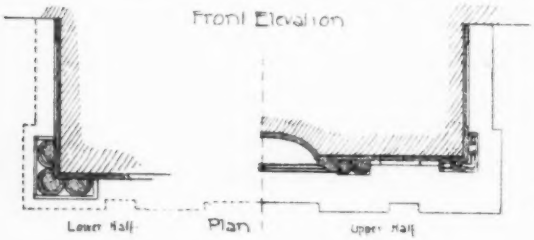
INTERIORS. F. W. Beall, Architect.



Front Elevation



Side Elevation



Hall Mantel.
Stanley Mortimer, Esq
Roslyn, L.I.

3/4" Scale

James Brown Lord, Architect.

cheaper and makes a very good finish, not so rich in color as oak, but with a stout and characteristic grain of its own, much to be preferred to the non-committal cherry. Formerly cherry was what it is not now; formerly cherry was red, quite red, approaching cedar; now all the red cherry is used up and there comes to market nothing but that with a faint brown cast, scarcely off the white. Almost all the cherry finish that we see is brought to the color of the cherry of the past by staining, or it is made the foundation of an imitation of mahogany itself. But for this purpose cherry is a needlessly expensive foundation, the cheap, and in many respects admirable whitewood is sufficient.

Whitewood we determine to adopt for the finish of our house throughout, staining it in soft browns and russets and yellows, not in imitation of any other wood, but simply for color effect, as we might use paint. Sometimes green and blue stains are used, not bright greens and blues, but subdued and modified, with excellent effect. The doors are somewhat upon our mind; in fact, the doors are the main reason why hardwood finish is so much more costly than painted pine. We get along well enough without greatly adding to expense if we make the mere mouldings of the standing finish of hardwood, but hardwood doors are another matter. Solid oak, solid mahogany are terms of admiration, but a solid oak door or a solid mahogany door is cheap and undesirable compared with a veneered door. In fact, in the best hardwood work all the doors are veneered. They are built first of strips of pine glued together and upon this the veneer of the wood required is placed; the mouldings are necessarily of solid oak, or whatever wood it may be. The trouble with solid hardwood doors is that they warp; it is to avoid this that the troublesome and expensive process of veneering is used. Solid hardwood doors are used to some extent for cheaper work, and as they are used only because they are cheaper are commonly seen in the cheaper woods, ash or whitewood for instance.

Moreover when people go to the expense of having veneered doors the temptation is strong to have both doors and all other woodwork polished, ending in what is called cabinet-work rather than mere carpenter-work finish.

But such expense is not usual nor reasonable for a modest country house as ours is to be. Hardwood we want for various reasons, the whimsies of fashion perhaps the strongest, and whitewood we have chosen among hardwoods. Whitewood is not so very hard, is commonly considered a soft wood, but it is much harder than pine, almost as hard as cherry, and, as the term hardwood refers really rather to the appearance of natural finish, it may as well be considered as a hardwood for the present. Indeed, as far as that goes the softest white pine makes a beautiful hardwood finish as far as appearance goes. Its natural color when varnished is a rich warm yellow, really a better color than either ash or oak.

But pine does not take stain well, the grain shows badly, so we have preferred whitewood, and we will make our doors of whitewood, too, solid, not veneered, although we know in advance that we shall have trouble with their swelling in damp weather and shrinking in dry in a maddening manner, sticking fast until they are planed off, and then leaving cracks that are open to criticism. Still, money is an object, and even cracks around doors can be tolerated when several hundred dollars are saved thereby.

Last of all come the floors, the upper floors, laid on top of the rough hemlock floors. Here again the possible variety in cost is very great, from the oak floor in narrow strips, planed and polished, to the ordinary North Carolina pine floor, the cheapest thing in the way of a floor available. But we have enlarged upon floors before and need not take them up again now.

There is another matter that deserves more than a passing word; it is the question of hardware. In this, as in plumbing, there a wide field for choice in the numberless patterns by each of a dozen different makers, all good and all bending their energies to bringing out something new every day.

Certain general considerations are

RESIDENCE. Manly N. Cutter, Architect.

all that we can lay down. In the matter of locks, for instance, the most important and intricate mechanical device about house hardware, few care to investigate their complicated interiors. It is rarely worth while to put very elaborate locks on the interior doors of a private house. For protection from possible night intruders bolts will serve far better, being stronger and quite unpickable as all but the most costly locks are. It is an excellent plan if burglars are feared, and we live in fear most of us—it is an excellent plan to put bolts on all the doors so that the householder, bolting them one by one behind him at night makes the progress of the burglar beyond the room where he may enter very much more difficult. For the locks themselves I should advise the simplest mechanism, one tumbler locks they call them, but the works of them should be of malleable, not cast, iron, and the brass bolt ends should be cast upon the stems, not rivetted to them. For the main entrance door, on the other hand, and very likely for the service entrance also, I should recommend the strongest, most elaborate and costly lock obtainable, within the limits of reasonable compatibility with the surroundings, one of the flat key locks with a cylinder full of tumblers, of which the Yale lock was the first and is probably still the best. These are beyond the power of any but an expert bank burglar to pick and can be obtained of considerable strength, an important matter when a house is left empty, and the door where the last one leaves must depend upon its lock alone against attack.

Of less importance, but more interest, are the ornamental parts, the knobs and key plates about the lock—furniture in architects' talk.

There are many kinds of knobs to be had, bronze, porcelain, wood, and in some places hemacite, made of compressed sawdust and coagulated blood, is used; but either porcelain or bronze is the usual choice, although wooden knobs are much used.

Of bronze there are two kinds, the solid cast bronze, and the thin sheet bronze, spun bronze it is called, the first very good and very costly, the sec-

ond not good for much as they are easily dented by accidental knocks in moving furniture, but much less expensive than the solid. Recently spun bronze has been made, filled up inside with typemetal or something of the sort, which I should think might be a good thing.

There is, too, in the market a gaudy material called electro-plate. Hinges and all sorts of hardware, but not knobs, are made of this, iron it is underneath, polished bronze to the eye. Porcelain knobs are either white or black, or the despised mottled brown called mineral, though the last, I fancy, is most grateful to the artist's eye. Still, so deep is the stigma upon mineral knobs that there is scarcely an architect that would dare to use them outside of kitchens and "offices." But there might be made, very likely there is made somewhere, a porcelain knob of a softer brown mottling or even of blue or green or red, such as is done in glazed tiles, which everybody would prefer to the staring white or black spots, and even an artist might admit was better than "mineral." Wooden knobs are beautiful, on the whole to be preferred, and solid bronze shanks, roses and escutcheons with them. There is a kind of finish for which I confess a fondness called "Boston finish" or "Tucker bronze." It is really iron japanned with a peculiar brownish greenish japan, and when well done has a fine rich color, more like weathered bronze and free from the flashiness of polished metal.

Have the hinges—butts they are called, that is to say butt-hinges, because they are screwed on the edge or butt of the door, and not on the face of it as the old hinges were—have them "loose butts" so that you can lift the doors off when necessary, "loose pin butts" are more convenient for heavy doors, but unless of the best steel bushed kind are apt to give trouble.

After all your trouble in selecting nice hardware, see to it that the painter does not spoil its appearance by careless daubs of paint. It requires care to paint around hardware without encroaching upon it in the least, but a skillful painter can do more difficult things than that if he tries.

As for the painting itself the only way is to get a good painter. The "art," for we use too little the good old word "art" for handicraft, is really too much an art of hand and brain even for house painting, to make it possible to get a good job by the closest specification. What, for example, has "Atlantic or Union white lead and pure linseed oil" to do with putting on a coat that will cover completely and neither shine in blotches nor gather in drops and ridges. The hardwood we will finish with a varnish of some kind, "hard oil finish" is cheap and good enough for a bright varnished finish of an inexpensive country house.

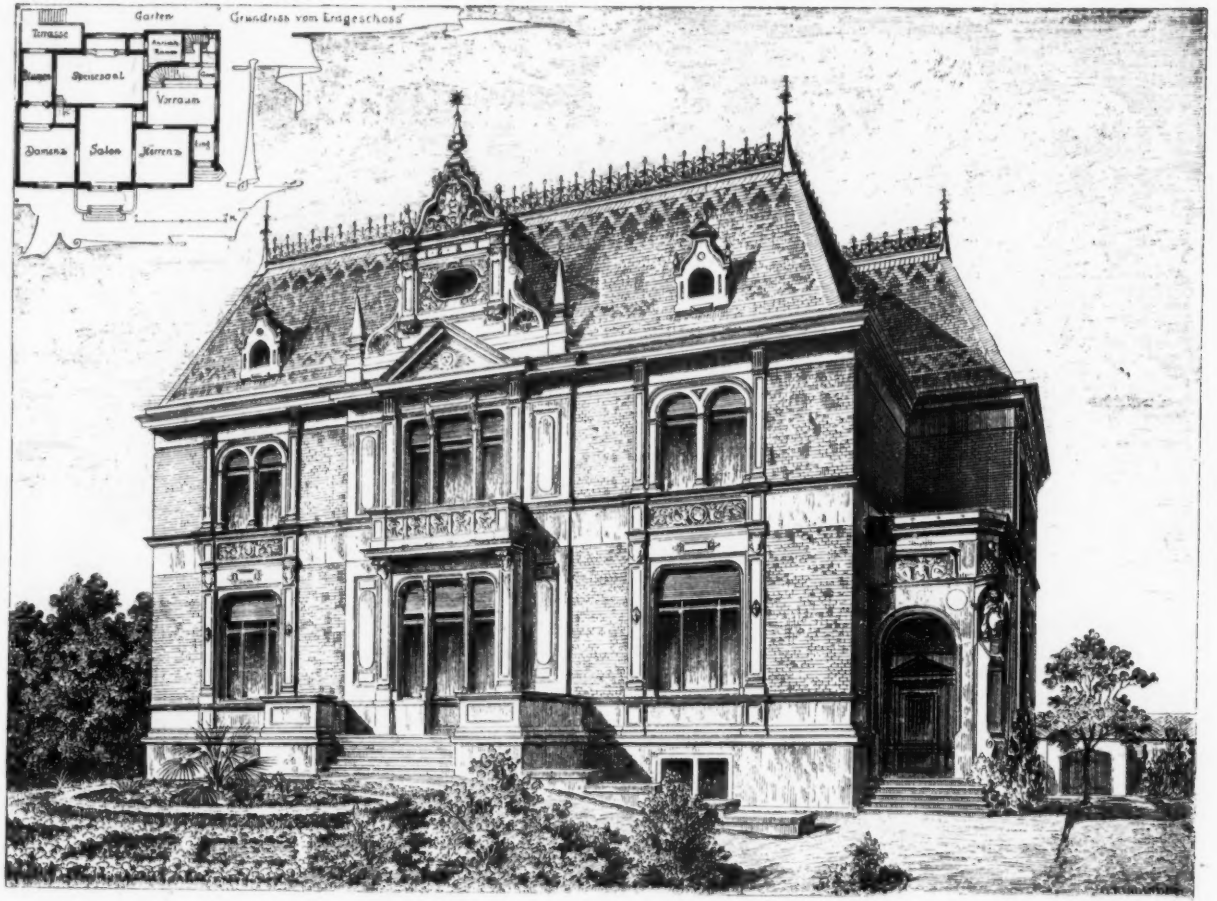
For more expensive work, where the doors are all veneered, the finish is polished, a very much more expensive way. In this substantially the same materials are used, shellac and varnish and filler, but each coat or at least some of the coats are rubbed with fine pumice stone before the next coat is applied.

With the completion of the painting and varnishing and the subsequent scrubbing of floors and cleaning of windows our house proper is done, save what supererogatory decoration we may lavish upon it.

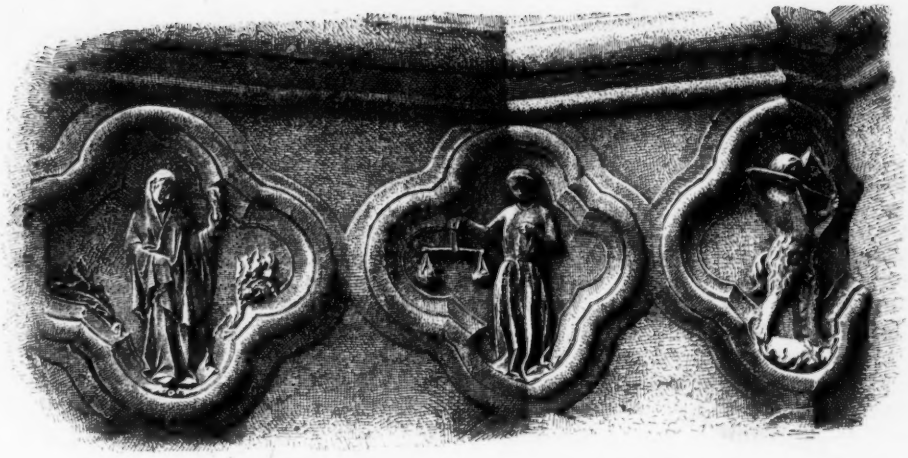
John Beverley Robinson.

St. Germain-en-Laye. HALL IN CHATEAU ST. LÉGER. Léon Carle, Architect.

Munich, Germany. RESIDENCE. Albert Schwartz, Architect.



Berlin, Germany. VILLA. Cremer & Wolffenstein, Architects.



FRENCH CATHEDRALS.

Part IV.

CHRONOLOGICAL SUMMARY.

I.

IN the accompanying tables an attempt has been made to arrange in a condensed form a chronological history of all the cathedral churches of France. It not only undertakes to tell what part of each edifice was built in each century, but it also shows the more important structural events connected with each building. It thus includes a record of parts that no longer exist, but which form an integral and invaluable portion of the life history of every church. The record begins with the eleventh century, save in the case of such cathedrals as were built prior to that time and which have survived to the present day. These buildings are few in number. The ravages of the barbarians, the Huns pressing in from the East, the Normans coming down from the North, and the Saracens from the South combined, with the insufficient methods of construction, to remove almost every church and every edifice of any sort well before the tenth century. The early histories of the cathedrals are filled with legends of buildings and rebuildings, epochs of decay and of destruction, often many times repeated, but of these almost legendary structures scarce anything has survived. And so, because the records of these early buildings are incomplete, because the facts in themselves are of small value and are without any bearing on the present edifices, all reference to them has been omitted, save where actual remains have survived. As the eleventh century marks the beginnings of the building era that culminated in the thirteenth, and as the life history of nearly every cathedral may be accurately dated from that time onward, it affords a convenient and decisive epoch from which to begin our histories.

The tables, as has been said, comprise a chronological summary of all the cathedral churches of France. It thus includes:

(1). All the present cathedrals of France.

(2). All churches which have had the rank of cathedral at any time in their history, but which are not now cathe-

drals in the proper ecclesiastical sense of the word.

(3). All churches once cathedral, now destroyed or in ruins, but including only those dating from the eleventh century or later.

(4). Temporary cathedrals.

(5). Churches which replaced former cathedrals, to which they are, in a sense, successors, but which never themselves had that rank.

It needs but a glance for the reader to grasp the fact that the number of churches given in these pages far exceeds the number of cities, and is thus greatly in excess of the number of sees. These, it should be premised, are based upon the exhaustive *Series Episcopo um* of Gams.* This list includes all the episcopal sees actually established in France, but it does not include the bishopric of Bourg, which existed for a few years only, and which has been included in the tables. On the other hand no notice is taken of many primitive sees existing before the eleventh century and which have not survived to later times. Thus the primitive see of Noyon is not mentioned, though it is known to have been located at Vermand, the identity of which is sometimes given as the city of S. Quentin, sometimes as a small village near that city. And it should be further noted that the cathedrals described here are those of France proper alone; the cathedrals of Corsica and the outlying possessions of France, whose bishops form part of the French hierarchy, are omitted. Nor is any mention made of the bishopric of Bethlehem (French *Bethléem*), that most singular of all episcopal sees, a bishop without land or people or church, that found refuge in Clamecy, a small village of the Nivernais, after expulsion from the Holy Land, and where a whole series of bishops succeeded each other until 1778.

The large number of edifices listed as cathedrals arises from several causes. In many cities the primitive cathedral was succeeded by a later building with a different name, and frequently on a different site. Even where these buildings have not survived to the eleventh century their names have been included, because this change of name and of location is an interesting fact in the history of the later building, whose history, indeed, would be incomplete without some reference to it. A number of cities had, further, two actual cathedrals at one and the same time, or rather two cathedral churches each with the rank of cathedral, each having its own body of canons and its individual chapter, but with a single bishop. Such was the case with Besançon, Toulouse, S. Lizier, or, to call it by its ancient Episcopal name, Conserans, and Autun. The cathedral of S. Dié comprises two churches, S. Dié and Notre Dame, connected by a cloister. More striking was the case of the cities of Sisteron and Forcalquier, in which the church of the latter city was recognized as co-cathedral with the mother cathedral of Sisteron, having, in 1061, been given a provost and chapter of its own by Bishop Gérard Caprerius of Sisteron. In all these cities one church finally became sole cathedral. In Besançon the cathedral of S. Étienne was destroyed in 1674, leaving S. Jean sole cathedral; in S. Lizier the cathedral of S. Marie de la Sède lost its rank of cathedral in 1667, after which date the church of S. Lizier became sole cathedral; the church of S. Jacques of Toulouse is not mentioned as cathedral in a charter of Louis VII., and the supremacy of the cathedral of S. Étienne is therefore dated from that time; in Autun, S. Nazaire ceased to be cathedral jointly with S. Lazare in 1770, and eight years later was demolished, save a single chapel. No one generally applicable reason for such double cathedrals appears to be known. In the case of S. Lizier, however, M. Jules de Lahondès has suggested, and with much apparent probability, that it may have had its origin in the time when the town was divided into two seigniorial districts, in one of which the bishop was lord under vassalage to the Count of Toulouse, and in the other he was absolute lord with the Count of Comminges as his vassal.

A more notable cause in adding to the number of cathedrals is the ruin

* P. P. B. Gams: *Series Episcoporum Ecclesiæ Catholicæ*. Ratisbon, 1873.

and decay produced by the progress of time. While only those cathedrals that, in rebuilding, have changed their names or sites, or both, are separately chronicled in the tables, nearly every cathedral in France has been rebuilt several times, so that the present church is in many instances the fourth or fifth. But as the larger part of this rebuilding occurred before the tenth century, for each successive inroad of each barbarian horde was marked by ruin and desolation, we are only concerned with later changes. A goodly list of cities show two cathedrals because the older had fallen into ruins. Thus the abbey church of S. Caprais became cathedral of Agen in place of S. Étienne, destroyed in the Revolution. The cathedral of Notre Dame of Alet was abandoned after Protestant injuries in the sixteenth century, and the refectory of the abbey of S. Benoît became the cathedral in its place. The cities of Arras and of Cambrai both lost their mediæval cathedrals in the Revolution, and when the sees were re-established with the Concordat other churches were taken for this purpose. Three cathedrals at three different epochs succeeded the primitive cathedral of Carpentras, each rebuilding—an unusual instance—being accompanied with a change of name. Huguenot injuries, which occasioned much injury and harm throughout the whole of France, and was the immediate cause of a vast amount of rebuilding and repair, led to the abandonment of the old cathedral of Notre Dame du Bourg in Digne in favor of the church of S. Jérôme, though the older cathedral is still used on certain feast days. The Revolution, which, like the Protestant injuries, occasioned so many changes in the churches of France, put the first cathedral of Dijon, S. Étienne, to the use of a storehouse, after which it was not used again for sacred purposes, the abbey church of S. Bénigne becoming cathedral in 1801. The co-cathedral of S. Mary of Forcalquier was injured in a siege in the fifteenth century, and the church of Notre Dame became cathedral in 1486. The cathedral of L'Assomption of Nice might be bracketed with this, having been destroyed in 1530, when the citadel of the city was enlarged, and the cathedral of S. Réparate was built in the lower town. The cathedral of S. Martin, of Montauban, was demolished by the Huguenots in the sixteenth century, and after using the church of S. Jacques temporarily, the present cathedral of Notre Dame was completed in 1739. The cathedrals of Rennes and of Riez fell several times into decay and were as often rebuilt. The old cathedral of Pamiers was destroyed in the fifteenth century, as was also the later cathedral of S. Antonin, which was rebuilt in the seventeenth century.

Several new cathedrals were built or made—a somewhat awkward expression that may be used to designate churches not originally built as cathedrals, but afterwards given this rank—because the locality of the first cathedral was deserted by the inhabitants for a more desirable quarter. The older part of the city of Aix, called the *Villes des Tours*, had fallen into such a state of decay from the Saracen invasions that in the eleventh century the cathedral of Notre Dame de la Sède ceased to be cathedral, and the episcopal chair was transferred to the church of La Transfiguration du Sauveur, popularly called S. Sauveur. Similarly with Carcassone, where the lower city began to be settled about the middle of the thirteenth century, and grew so rapidly that when the Concordat was made in the present century the church of S. Michel in the Ville Basse was made cathedral in place of the ancient cathedral of S. Nazaire in the Cité.

Closely allied to these are sees and churches transferred from one city to another through the decay of the earlier one. Thus the city of Glandèves was abandoned for the neighboring town of Entrevaux, in the fourteenth century, where the canons first established themselves in the church of S. Martin, abandoning this, in its turn, for the new cathedral of L'Assomption, begun in 1610. In a similar manner the city of S. Lizier finally absorbed the city of Conserans, but the two churches of S. Lizier and of S. Marie de la Sède were joint cathedrals until 1667. These instances are rather examples of the

transformation or growth of a city than deliberate transference of the episcopal see, as happened when the see of Eauze was transferred to Auch in the seventh century; as happened again when the see of Aleth was transferred to S. Malo in 1163, when the see of Antibes was transferred to Grasse in 1244; that of Maguelone to Montpellier in 1527; that of Elne to Perpignan in 1662; that of Maillezais to La Rochelle in 1648. The see of Boulogne-sur-Mer succeeded the see of Thérouanne in 1556, after the total destruction of the former city by Charles V. in 1553. The see of Toul was united to that of Nancy in 1801, and the bishop of that city is now styled the bishop of Nancy and Toul. All these changes were due to the increased importance of the latter cities in later times.

While all the cathedrals show periods of rebuilding and of destruction of former edifices, the older cathedral has, in a few instances, remained until the present time. Thus the famous ancient church, known as the Basse Œuvre of Beauvais, ceased to be the cathedral of that city in the thirteenth century. The church of S. Étienne, destroyed in the Revolution, was the cathedral of Lyons until the thirteenth century, though the present cathedral of S. Jean, originally the baptistery of S. Étienne, was begun in the twelfth. The religious enthusiasm of the present century has given a new cathedral to Marseilles in place of the old and insignificant cathedral of La Major. In Périgueux the abbey church of S. Front was made cathedral in 1669 in place of S. Étienne, which is still standing. The need of a new and larger cathedral for the city of Grenoble resulted in the erection of the cathedral of Notre Dame in the eleventh and twelfth centuries, and which was structurally connected with the older cathedral of S. Hugues, a portion of which still remains.

Another series of churches, whose histories are briefly summarized in the following pages, are those which succeeded, on the same site, to early cathedrals, though never themselves, so far as the existing or later structure is concerned, having had episcopal rank. These include the church of S. Acheul, in Amiens, which succeeded the primitive cathedral of Notre Dame des Martyrs; the church of S. Aphrodise of Béziers, cathedral to the middle of the eighth century; the modern church of S. Vincent at Dax occupies the site of the primitive cathedral of that city (cathedral to the eleventh century); the church of S. Étienne at Orleans, destroyed in 1562, was a survival of the primitive cathedral (to the fourth century); at Reims the chapel of S. Pierre, in which worship was discontinued in 1710 and which was finally removed in the present century, stood upon the site of the primitive cathedral (to the fourth century); in Verdun the primitive cathedral of S. Pierre et S. Paul, cathedral to the fifth century, was succeeded by the abbey of S. Vannes, whose church was removed as recently as 1817.

Pro-cathedrals, or churches used temporarily while a new cathedral was rebuilding, include those of Arras, Bourg, Marseilles, La Rochelle, Le Mans, Montauban and Rennes.

II.

Closely connected with the duplication of episcopal churches in the same city is the question of name. This, as has been explained, adds considerably to the bulk of our list. Yet the questions it raises are more interesting than this. There is comparatively little variety in the dedicatory names given to the cathedrals of France. The greater part of them are in honor of Notre Dame, and when this designation and that of S. Étienne are set to one side there are relatively few other names to be noted. Differences in name does not imply a difference in cathedral, for in many instances the same church has had various names at various times in its history. Thus the cathedral of Amiens was first called Notre Dame des Martyrs. This was built on a different site from the present cathedral, and has survived, as has been said, in the present church of S. Acheul, in the environs of Amiens. But the present cathedral was first dedicated to S. Pierre et S. Paul; in 1159 it was dedicated afresh to Notre

Dame et S. Firmin; and again, in 1483, to Notre Seigneur, S. Vierge et Tous les Saints, a fact probably forgotten by most of those who know it exclusively as Notre Dame. The cathedral of Séez was first dedicated to Notre Dame. In the sixth century it was known as S. Gervais et S. Protais, but in 1786 it was placed under the patronage of Notre Dame. A more striking instance is supplied by the cathedral of Valence, primitively dedicated to S. Apollinaire et S. Cyprien; a second cathedral was dedicated by Pope Urban II. in 1005 to the B. V. Marie et S. Corneille et S. Cyprien, and yet, although the name was excluded from this dedication, S. Apollinaire has always been recognized as the chief patron of the cathedral, which is now known solely by his name. Less complicated instances are furnished by the cathedral of S. Trophime at Arles, called S. Étienne to 1152; by the cathedral of Notre Dame de Grâce of Clermont-Ferrand, primitively called Notre Dame et S. Laurent; by the cathedral of S. Julien of Le Mans, called Notre Dame et S. Pierre to the ninth century, then S. Gervais et S. Protais, and, in 1120, B. V. Marie, S. Gervais et S. Protais et S. Julien; by the cathedral of Notre Dame de Pomeriis (French *des Pommiers*) or Notre Dame hors-la-ville, of Sisteron, called Notre Dame et S. Thyrse to 1343; and by the cathedral of S. Gatien of Tours, called S. Maurice to the fourteenth century. In some of these instances, notably in the case of Arles and of Tours, the change in name was brought about by the increased importance given to the worship of the saint in whose honor the later dedication was made. In the case of the cathedral of Sisteron the addition of S. Thyrse to the title doubtless arose from the fact that the preceding cathedral had been dedicated solely to this saint, and it was probably found convenient to drop the name at a later time. Although the cathedral of Besançon is now called only the cathedral of S. Jean l'Evangéliste, the proper title is S. Jean l'Évangéliste et S. Étienne, the title of the sister cathedral having been merged with that of the survivor.

And, indeed, we frequently find instances where the popularity of one saint has so overshadowed that of the other or others to which it has been dedicated that even the name of Notre Dame has been allowed to disappear. The cathedral of S. Flour is an interesting illustration. Though now known wholly as the cathedral of S. Flour in the city of that name, it was dedicated in 1466, as an inscription on the façade tells us, "to the Honor of God, of S. Peter, Apostle, and of S. Flour, Confessor." The cathedral of S. Dié, once called S. Maurice et Notre Dame, was dedicated to S. Dié in 1051. Originally it is said to have been dedicated to SS. Maurice, Exupère, Candide et Leurs Compagnons. The adjoining church of Notire Notre Dame, connected with the cathedral of S. Dié by a common cloister, was, in the seventh century, dedicated "en l'honneur de la Mère de Dieu, des Apôtres Pierre et Paul et de leurs compagnons, des SS. Euchaire, Materne, Maximin et de tous leurs compagnons."

The influence of popular will in affecting the change of name has no more singular illustration than is supplied by the co-cathedral of Forcalquier. The first co-cathedral of that city was called S. Mary, though it had been primitively called Notre Dame. When the church of Notre Dame was made co-cathedral in 1486 it was popularly called Notre Dame du Marché, or Notre Dame du Puits. But after assuming its new rank the people insisted upon calling it S. Mary, while the former co-cathedral of S. Mary was then called Notre Dame, both churches exchanging titles in obedience to popular caprice. Another interesting example is the cathedral of La Major of Marseilles. The first title of this church is said to have been S. Lazare. But S. Lazarus was the first bishop of Marseilles, at least so tradition says. This at once brings us up before two contradictory facts, of which only one can be true. If S. Lazarus was the first bishop of Marseilles, he could not have dedicated a church to himself; though an oratory or chapel, in those distant times, might readily have been known as S. Lazarus's with-

out having been dedicated to him. But certainly no chapel or cathedral could have been used by S. Lazarus himself that bore his own name. The dedication of L'Assomption, said to have been given to the cathedral later, seems much more likely to have been the first name.

As for the name of La Major it was doubtless a survival of the Latin *Ecclesia major*, with which words the church was often described. The present cathedral of Lyons, S. Jean, was originally the baptistery of the older cathedral of S. Étienne, and with which it was connected by a common cloister, which joined the adjacent church of S. Croix, making a group of three. In the middle ages, even after the thirteenth century, the church of S. Jean was always spoken of and referred to as the *major ecclesia Lugdunensis*, "the great church of Lyons." These words were never applied to the church of S. Étienne even when it was cathedral, but were only used to describe the church of S. Jean, which before it became the cathedral in the thirteenth century was the largest church of the city.

III.

No room can be given in this summary to debatable questions, whose number is almost without end. The limits of space forbid the consideration of any of these points until we can take up the individual histories of the cathedrals. In instances of doubt the most probable date has been chosen and no regard given to problematical considerations. The tables are intended only as a brief general record. Detailed chronological tables of the cathedrals of Reims or of Chartres or of Paris and of many other great churches would comprise several printed pages each, were every item included. Nothing of this sort has been attempted in the following pages, where the utmost condensation has been employed. The exigencies of a magazine will not permit the discussion of authorities or the giving of references, and the works consulted in the preparation of these tables are therefore grouped together in a general list.

In order that the purpose of the Chronological Table may be made perfectly clear let us briefly run through the history of one cathedral as illustrated in it, and which may be taken as an index of the entire list. Under Reims we find, first, S. Pierre, the primitive cathedral, whose date is so remote as to be impossible of authentication. Absolutely nothing is known of this church, or oratory, as it probably was. A church that is said to have been built on its site was used for worship up to 1710. Later it fell into ruin, and was finally removed in 1793.

Next is the church of the Saints Apôtres, cathedral from 314 to 401; at least, such are the dates claimed for it. This was succeeded by the collegiate church of S. Symphorien, of whose architectural history nothing is known. It existed in 1793 but no vestige of it remains to-day.

Of the present cathedral of Notre Dame our record begins with a rebuilding in the ninth century. In 1211 it was burned, and the next year the present edifice was begun. It was consecrated in 1242 and the building almost completed in the thirteenth century. In the fourteenth century the first three bays of the nave were added and by 1381 the western façade was completed to the King's Gallery. The nave chapels were added in the fourteenth century. In 1428 the western towers were completed, or rather reached their present height. The cathedral suffered from fire in 1481, the transept tower spires and the balustrade around the roof being destroyed. Sundry repairs were forthwith made. In the sixteenth century the word "Restorations" suggests the Protestant injuries, which are known to have affected almost all the churches of France. Internal repairs were made between 1538 and 1574. In the seventeenth century the west portal and rose window were repaired. Between 1742 and 1785 many internal changes were made, and under the guise of restoration incalculable harm was done to the beautiful mediæval interior and its priceless art. In the present century the cathedral has been completely restored by the architects Arveuf,

Viollet-le-Duc, Millet, Ruprich-Robert and Darcy. The most noticeable external change has been the rebuilding of the balustrade.

It is the history of a great church in outline only; but it may help to fix certain facts upon the memory that will be useful in more extended study.

Barr Ferree.

EXPLANATION OF THE TABLES.

Names of cities are printed in **bold-faced type;** where there has been a change of name the earlier name of the city is printed in similar type and inclosed in a parenthesis.

The dedicatory title of the cathedral follows the name of the city. Where there have been several titles to the same church they are sometimes designated in chronological order, as (1), (2), (3). The French form of the names have been retained throughout as seeming likely to be of more value to travelers and students than the Anglicized form. Where a popular name of a cathedral differs from its full title the popular name is printed first, the full title following next in parenthesis.

The figures following the name of the cathedral, if within the parenthesis, indicate that that name was used until that date, when the present title was substituted for it. Figures outside a parenthesis indicate the dates at which each church had the rank of cathedral. As we are not concerned with cathedrals earlier than the eleventh century no record is made of the time at which sees then established began. Dates of foundations of sees are only given when later than the eleventh century.

In a few instances where constructions may be indifferently referred to two successive centuries the vertical lines are broken and the portion referred to printed across both columns.

Words in *italic* indicate that only those portions of the cathedrals, of the work done in the century in which they are to be found, have survived to the present time. The rebuildings of one century frequently destroyed those of a preceding century while still leaving a portion of the earlier work.

Important and apparently authentic dates have been inserted wherever possible, but these dates only refer to such parts as are named before the next following semi-colon or period. In other words, if a date begins a column it does not indicate that everything in that paragraph was done or happened at that time. The table aims only in showing the work accomplished in each century, or the principle events happening in it; it is, therefore, unsatisfactory in failing to distinguish between work done at the beginning of a century and that done at the end, which, in most instances, shows great variety and difference.

Injury, desecration and ruin were so characteristic of the Protestant and Revolutionary epochs in the sixteenth and the eighteenth centuries that, to avoid overcrowding, all reference to such happenings are omitted save when a church was ruined or partly destroyed. Careful readers of the tables will note that the words "rebuilding" or "repairs" in the sixteenth century usually indicates a destruction during the Protestant period. To complete the record "injury" should be inserted in the columns of the sixteenth and eighteenth centuries in nearly every instance.

The word chapel is used in a general sense as applicable to any structural chapel (that is, not simple altars or recesses within the cathedral). The words Lady Chapel are applied to the central apse chapel, usually dedicated to Notre Dame and usually called so in France, though more generally known as the Lady Chapel in England.

	XI Century	XII Century	XIII Century	XIV Century
Agde. S. Étienne. To 1801.	.....	Chiefly.	Cloister.	.....
Agen. S. Étienne. To 1793.	Restored.	.....	Rebuilt, not completed.	.....
S. Étienne. From 1803 (S. Caprais to 1803).	.....	Transept and 2 chapels.	Apse; transept triforium and vaults.	Last bay nave; W. portal retouched.
Aire-sur-l'Adour. Notre Dame.	.....	Choir; transept; *apse chapels.*	.....	Nave.
Aix. Notre Dame de la Seds (de Sede). To end XI century.	.....	.....	.....	.....
S. Sauveur (La Transfiguration).	1080 new church begun; *s. aisle;* cloister.	1103 consecrated.	1285 apse; choir; transepts.	Continued; 1323 tower.
Alais. S. Jean Baptiste. 1694–1801.	*Fragments in façade.*		.....	.....
Albi. S. Cécile. (S. Cécile et S. Croix.)	No documents before X century; many gifts X, XI, XII centuries prove existence of cathedral.		1282 begun; chiefly foundations.	Nave done; part tower.
Alet. Notre Dame. 1318–1577.	1018 rebuilt.	Some work done.	.....	Apse; upper part tower.
S. Benoît. 1577–1801 (originally Refectory of Abbey).	Built.	Continued.	.....	.....
Aleth. *See* S. Servan.	.....	.....	.....	.....
Amiens. Notre Dame des Martyrs (now S. Acheul) primitive cathedral.	.....	.....	.....	.....
Notre Dame, (1) S. Pierre et S. Paul; (2) Notre Dame et S. Firmin; (3) Notre Seigneur, la S. Vierge et Tous les Saints (in 1483).	Burned; 1019 repaired.	1107 burned; rebuilt; 1159 dedicated.	1218 destroyed; 1220 present church begun; 1288 practically done.	Chapels.
Angers. S. Maurice (primitively Notre Dame).	1030 dedication; *lower part nave walls, small buttresses;* 1032 fire; restored.	1150–60 rebuilt, nave vaulted; choir; façade; first stages W. towers; 1178–98 S. transept; crossing began.	1240 N. transept done; 1274 choir, one nave chapel; sacristy; W. porch.	.....
Angoulême. S. Pierre (S. Pierre et S. Paul) (S. Saturnin, to VI century).	1000–17 rebuilt; *first bay.*	Rebuilt; 1128 dedicated.	1259 probably S. transept tower.	Choir aisles; S. windows nave.
Annecy. S. Pierre ès liens. From 1822.	.....	Tower.	.....	.....
Antibes. To 1244.	Repairs.	.....	Parts.	.....
Apt. Notre Dame et S. Castor. To 1801.	Reconstructed.	.....	Cloister (now destroyed).	1313 N. aisle.
Arles. S. Trophime (called S. Étienne to 1152). To 1801.	Reconstructed.	W. porch, crypt chapel, part cloister.	E. cloister.	1389 W. cloister.
Arras. Notre Dame. To 1793.	1030 choir, transepts; consecration.	1160–70 rebuilt.	.....	1373 nave rebuilt.
S. Jean Baptiste. 1801–1833.	.....	.....	.....	.....
S. Vaast (Notre Dame et S. Vaast). From 1833.	.....	.....	.....	.....
Auch. S. Marie (Nativité de Notre Dame).	.....	.....	.....	4 times demolished and rebuilt prior to XV century.
Autun. S. Nazaire (S. Nazaire et S. Celse from XIV century) (jointly with S. Lazare to 1770).	.....	.....	.....	.....
S. Lazare.	.....	1120 begun; 1132 consecrated; 1178 W. *porch.*	Flying buttresses end XIII century.	.....
Auxerre. S. Étienne. To 1801.	1035 burned; rebuilt *crypt.*	1119 consecrated.	1215–34 choir; cloister.	Nave; W. portal; transepts.

XV Century	XVI Century	XVII Century	XVIII Century	XIX Century
.....	.....	.....	.....	.....
1499 repairs.	1501-3 spire; reconstruction.	.....	1782 restoration; W. façade; 1793 destroyed.	.....
.....	1508 nave vaults; nave windows rebuilt.	1624 consecrated.	.....	.....
Nave; W. façade fortified.	.....	Central apse.	1756-83 choir.	1835-37 aisles.
.....	.....	.....	Destroyed.	Present church.
1425 tower done; nave; 1477 W. façade.	1534 dedicated; 1594 repaired.	1695 chapel S. Sépulcre modernized; 1594 N. nave restored; 2 chapels.	.....	1860 restoration; 1880 tower balustrade.
1472 repairs; restoration.	.....	1668 tower done; repairs.	1771 choir and nave rebuilt. 1775 tower dome removed; vaults rebuilt. 1780 consecrated.	Internal changes; repairs.
Upper part tower; choir; 1473 S. portal begun; 1476 consecrated.	1501 S. portal done; 1512 completed.	1693 chapel S. Clair.	.....	1850 restoration by Daly; roof balustrade.
.....	1577 injured; abandoned.	.....	.....	1830 one tower fell; other part destroyed.
.....	.....	Sanctuary and sacristy vaults; W. door.	1787-9 internal repairs, restorations. 1793 sold; demolished save sanctuary and sacristy.	.....
.....	.....	.....	.....	.....
.....	.....	.....	1752 rebuilt.	.....
Tower, upper part W. façade.	1527 central spire; 1529-33 central spire rebuilt.	1627, 1665 central spire injured; repaired.	1761 sanctuary decorations.	1812 external restoration; later restoration by Massenot.
1452 choir tower destroyed; 2 chapels; 1437 cloister.	W. towers twice destroyed; rebuilt; 1540 central W. tower; W. statue gallery.	.....	W. porch removed; cloister repaired.	1831 W. towers burned; 1840 W. towers rebuilt; restored by Binet and Duvêtre.
.....	Injured; 3 towers destroyed.	1648 rebuilt; done.	.....	Restoration by Abadie.
.....	.....	.....	Rebuilt.	.....
.....	.....	.....	Façade.	.....
.....	1534 apse; façade; vaults; 1570 tower.	1660-64 chapel S. Anne.	1721 repairs; vaults raised.	1842 restoration.
1440 choir and apse rebuilt.	.....	1695 internal changes.	.....	Restored by Révoil.
1407 nave done; 1484 done save one tower.	.....	.....	Internal changes; 1799 sold.	1802 destroyed.
.....	1565-84 built.	.....	1728 tower.	Restoration.
.....	.....	.....	1755 rebuilt.	1814-33 continued.
1489 rebuilding begun.	1548 consecrated; transepts and nave uncovered.	1685 W. towers done.	.....	.....
....	.....	1699 part vault fell.	1778 demolished; chapel S. Aubin remained.	....
1465 central tower burned; rebuilt; flying buttresses repaired, chevet; chapels.	Chapels; sacristy.	.....	Interior modifications; choir pilasters.	Restoration.
S. transept portal.	N. tower; N. transept portal done.	.....	.....	Restoration.

	XI Century.	XII Century.	XIII Century.	XIV Century.
Avignon. Notre Dame des Doms.	*c.* 1038 partial rebuilding; *upper nave walls.*	W. portal.	.....	Nave; chapels.
Avranches. S. André. To 1801.	Begun 1025; nave; towers.	Choir; ambulatory; apse; chapels; tower; 1121 consecrated.	Burned early XIII; rebuilt; nave arches and windows, N. porch.	.....
Bayeux. Notre Dame.	1046 burned; rebuilt 1077 consecrated.	1106 burned; *nave arches; 2 towers.*	Upper part nave; spires; façade; choir.	S. transept portal.
Bayonne. Notre Dame.	.....	1140 rebuilt.	1213 begun; choir; apse; chapels; lower parts transepts; transept porches; cloister.	Nave; aisles; upper part transepts; vaults; W. portal; W. towers begun.
Bazas. S. Jean Baptiste. To 1801.	1070–80 rebuilt; 1096 consecrated; *nave pillars to 6th pair.*	.....	1233 rebuilt on old base; nave; apse; aisles; W. portals.	.....
Beauvais. Basse Œuvre. (Notre Dame et S. Pierre.) To XIII century.	Chiefly X and XI century.	.....	Door on S. side.	.....
S. Pierre.	.....	1180 burned.	1247 rebuilding begun; 1272 choir done; 1284 vault fell.	1322 consecrated; 1337–47 vault rebuilt.
Belley. S. Jean Baptiste.	.....	.....	.....	.....
Besançon. S. Étienne.	1048 consecrated.	.....	.....	.....
S. Jean l'Evangéliste (S. Jean et S. Étienne).	1031–67 rebuilt *fragments of aisle walls.*	Restoration; 1148 high altar consecrated; *nave arches; W. apse.*	1237 nave triforium and vaults; one chapel.	.....
Béziers. S. Aphrodise (S. Pierre et S. Aphrodise). To middle VIII century.	[Restored in X century; ancient crypt.]	.....	Repairs.	.....
S. Nazaire (S. Nazaire et S. Celse). To 1801.	.....	Reconstruction.	1215 restored; transepts; part nave.	1300 consecrated; cloister; choir; nave.
Blois. S. Louis (called S. Pierre to 650; S. Solenne to 1730). From 1697.	1016 rebuilt.	1106 rebuilt.	.....	1390 unsafe; taken down; tower foundations.
Bordeaux. S. André.	1096 consecrated; apse; choir; transepts done; nave in construction *lower part W. façade and nave.*	Continued; *upper part W. façade; decoration nave arches.*	1260 choir begun. Part nave vaults rebuilt; nave repaired.	1310 choir done; towers; transepts; cloister.
Boulogne-sur-Mer. Notre Dame. 1566–1813.	[Crypt, only part extant, may be prior to IX century.]	Probably rebuilt.	.....	1302 chevet and choir.
Bourg. Notre Dame. 1515–16; 1531–35.	[First chapel IX century.]	.....	Date unknown; mentioned 1295.	.....
Bourges. S. Étienne.	*Rebuilt; fragments; part crypt.*	Lower church, *side portals.* 1190–95 present begun.	E. end probably first quarter XIII; upper crypt; 1275–80 W. part.	1324 dedicated; part W. front.
Cahors. S. Étienne.	.....	1119 consecrated; N. portal.	1285 upper part choir; rebuilt; vault; cloister; 1293 apse vault.	W. façade; chapels, sacristy; cloister.
Cambrai. Notre Dame (Notre Dame et S. Jean Baptiste).	1023-30 rebuilt; dedicated; 1079 rebuilt; dedicated.	1148 burned; 1150-80 rebuilt; nave; transept.	1230–50 choir and apse chapels.	Chapels.
Notre Dame (formerly Abbey S. Sépulcre). From 1804.	1060 cloister.	.....	.....	.....
Carcassonne. S. Nazaire (S. Nazaire et S. Celse). To 1802.	Crypt; tower.	*c.* 1100 rebuilt; nave.	1269 choir enlarged.	1310–1320 rebuilt; choir, transepts, chapels.
S. Michel. From 1802.	[in Ville Basse.]	.....	.....	Chiefly.
Carpentras. S. Antoine. To IX century.	[Built VI century.]	.....	.....	.....
Notre Dame. To 982.	[Built in X century.]	.....	.....	.....
S. Pierre. To XV century.	[982 begun.]	Rebuilt.	Done early XIII *tower and one bay.*	1312 city burned.
S. Siffrein (Notre Dame, S. Pierre et S. Siffrein). To 1805.	.....	.....	.....	.....

XV CENTURY.	XVI CENTURY.	XVII CENTURY.	XVIII CENTURY.	XIX CENTURY.
1410 tower fell; 1431 rebuilt.	Chapel l'Annonciation.	1671 choir; 1680 chapel La Résurrection.	.....	.....
Towers rebuilt. Nave chapels, S. transept, chapter.	N. porch repaired.	.....	1794 demolished.	1802 ruins removed.
Central tower.	.....	Internal changes (choir); 1676 dome destroyed.	1714 dome rebuilt.	Dome rebuilt; restoration.
Upper part choir; 1460 S. W. tower continued.	1515–44 S. W. tower continued.	.....	.....	Restored by Manchoulas and Bœswillwald; 1877 N. W. spire.
Tower; nave vaults done.	Tower; repairs; 1537 façade done; 1599 aisle vaults done.	1635 nave vaults; exterior decoration done.	1724–46 W. gable; part vaults rebuilt.	1840 restoration by Duphot.
.....	.....	.....	.....	1866 first used for worship after Revolution.
Minor works.	1500–37 transepts; 1527 N. portal; 1548 S. transept portal; 1573 central spire fell.	W. wall.	1757 internal changes; 1783 central spire destroyed.	.....
1413 Choir.	.....	.....	.....	1864 almost total rebuilding.
.....	.....	1674 destroyed.	.....	.....
Nave chapels.	Nave chapels.	1678 internal changes; E. apse.	1729 tower fell; W. apse destroyed; both rebuilt 1730–56.	Restorations; 1860 tower done; 1870 W. apse restored.
Tower, choir, transepts, sacristy, S. aisle chapels, S. door, W. rose.	.....	.....	Cloister destroyed and rebuilt; sanctuary decorations.	Cloister removed.
1443 Sacristy; injured in seige; repairs.	.....	.....	.....	.....
.....	1544 upper part tower begun.	1609 tower done; 1678 all save tower and porch blown down; rebuilt.	Rebuilding continued; 1730 consecrated.	.....
Vaults repaired; some buttresses; 1440–92 Tour Pey-Berland.	1501–29 nave vaults rebuilt; 1554 W. nave bays rebuilt; renaissance buttress.	Point spire rebuilt.	1787 wood of roof burned; 1793 spire of Pey-Berland destroyed.	1820 N. façade injured by falling gable; restorations.
.....	1544 injured in seige repairs; repairs after 1562.	1621 repairs done.	1798 sold and removed.	1820 beginning present church.
.....	1505–1523, 1548–60 built.	1648 W. façade done; 1675 rebuilding done.	Tower restored.	Restorations.
Chapels; outer W. tower; N. W. tower.	1508–36 N. W. tower; 2 W. portals rebuilt; changes W. front; side portal porches.	1699 fire.	1735 central spire removed; 1757–60 sanctuary decorations.	Roof balustrade; buttress pinnacles; minor changes; restorations.
1484 one apse chapel, cloister.	Cloister done.	.....	.....	.....
1472 done; consecrated.	Spire injured; chapels.	.....	1719–26 sanctuary decorations; 1796 sold; removed.	1809 last vestiges removed.
.....	1540 tower; *fragments.*	.....	1703–29 built.	1859 fire; restored; enlarged.
Sacristy repaired.	.....	.....	.....	1850–79 restored by Viollet-le-Duc.
.....	.....	.....	.....	1849 fire; restored by Viollet-le-Duc.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
In ruins.	.....	.....	.....	.....
1404 begun.	1519 done; choir; apse; W. façade not decorated.	1605 W. façade done.	.....	Apse balustrade; 1829 cloister removed.

	XI Century.	XII Century.	XIII Century.	XIV Century.
Castres. S. Benoît. 1317-1801.	.....	Tower.	.....	.....
Cavaillon. S. Véran (Notre Dame et S. Véran). To 1793.	[Probably built IX century]; 1023 dedication, probably of rebuilt cathedral; *cloister.*	Cupola; tower; restoration end XII century.	1232 dedication.	Chapel S. Véran.
Châlons-sur-Marne. S. Étienne.	.....	1138 fire; rebuilt. 1147 consecrated; *N. tower.*	1230 fire; rebuilt.	N. chapels.
Chalon-sur-Sâone. S. Vincent. To 1801.	.....	Transepts; external apse arches.	Choir; apse.	Nave triforium; upper windows.
Chambéry. S. François de Sales. From 1779.	Crypt.	.....	.....	.....
Chartres. Notre Dame.	1020 burned; rebuilt; 1030 burned; 1037 consecrated; *crypt;* 1091 *foundation S. tower.*	*c.* 1110 foundation N. tower; 1140-60 W. facade; *c.* 1170 spire S. tower; 1194 fire; rebuilding; 1198 choir dedicated.	1210-12 transept porches begun; 1260 consecration; W. rose.	Façade gables; statuary S. porch; repairs; 1349 chapel S. Piat; 1395 top S. spire rebuilt.
Clermont-Ferrand. Notre Dame de Grâce (primitively Notre Dame et S. Laurent).	Rebuilt X or XI century.	.....	1248 rebuilt; choir.	Transepts, towers, part nave, nave chapels before 1350.
Condom. S. Pierre. 1317-1793.	... .	.....	.....	Sanctuary chapel.
Conserans. *See* S. Lizier.	.....	.....	.....	.....
Coutances. Notre Dame.	1030 begun; 1056 consecrated; 1091 done; *interior of towers.*	.....	Chiefly built between 1251-74; chapels.	Chapels; upper gallery W. façade; 1356 injured; repairs.
Dax. S. Vincent. Before 511.	.....	.....	.....	.....
Notre Dame. To 1805.	.....	.....	Rebuilt; *sacristy, porch, portal,* 2 *buttresses.*	.....
Die. Notre Dame. To 1276 and 1687-1794.	Porch; part wall XI or XII century.		.....	.....
Digne. Notre Dame du Bourg. To 1591.	[Part from IX century; part crypt and tower, may date IX century.]	Rebuilt end of XII.	Work continued.	Chapels; 1397 fire.
S. Jérôme (Notre Dame et S. Jérôme). From 1591.	.....	.....	.....	.....
Dijon. S. Étienne. 1731-1801.	[Begun X century.]	.....	.....	.....
S. Bénigne. From 1801.	1016 reconstructed; *W. portal;* crypt enlarged.	1106 dedicated; rotunda.	Injured by tower falling; 1280-91 rebuilt.	Parts W. façade; W. towers.
Dol. S. Samson. To 1793.	.....	.....	1231-65 choir; nave earlier; S. tower.	Choir chapels.
Eauze. Cathedral to VII century. Transferred to Auch.	.....	.....	.....	.....
Elne. S. Eulalie. To 1602.	1042-69 rebuilt.	Oldest part cloister; 1140 fortified.	Choir enlarged.	Part cloister; chevet continued; chapel S. Agnès.
Embrun. Notre Dame. To 1801.	*c.* 1005 rebuilt.	Apse aisles.	Rebuilt before 1225; nave vault; W. façade; tower; porch.	.....
Entrevaux (Glandèves). Notre Dame la Dorée (N. D. de la Sedz, de Sede).	*c.* 1032 rebuilt.	.....	.....	1395 Glandèves abandoned for Entrevaux.
S. Martin. XIV-XVII centuries.	.....	.....	.....	Built.
L'Assomption de la B. V. Marie. 1610-1801.	.....	.....	.....	.....
Evreux. Notre Dame.	1072 consecrated; *arches 2 last bays; nave; part aisle wall.*	1119 burned, rebuilt; 1126 consecrated; 5 *nave arches; vestibule to triforium; organ tribune.* 1194 fire; upper parts nave destroyed.	1202 N. triforium; S. later; 1240 clearstory; 1275 choir; nave chapels.	Choir continued; 1356, 1379 fires.

XV Century.	XVI Century.	XVII Century.	XVIII Century.	XIX Century.
.....	1567 almost destroyed; repaired.	1678 rebuilding begun.	1718 done.	.....
.....	.....	.....	.....	Restoration.
.....	Some chapels; 1520 spire N. tower.	1628 W. portal, 2 bays nave; 1668 fire; 1669–72 apse chapels.	.....	Spires; 1850 S. transept portal; restorations.
Transept chapels; 1403 consecrated.	Chapels.	.....	Tower destroyed.	1827–44 W. façade and towers by Lebas.
1430 begun; 1488 consecrated.	1507 portal; 1587 W. façade done.	.....	.....	.....
1412 chapel Vendôme	1501 chapel S. Jérôme done; 1506 fire, N. spire destroyed; 1506–14 N. spire rebuilt.	1674 fire; 1691–2 top S. tower repaired.	1744 W. rose repaired; 1753 top S. tower repaired; interior decorations; 1794 lead roof removed.	1836 severe fire; rebuilding; restorations by Lassus and Boswillwald.
Nave flying buttresses; upper part towers.	1505–17 roof.	.....	Internal changes; 1793 central spire removed.	W. front by Viollet-le-Duc.
.....	1506–21 rebuilt; 1531 consecrated.	.....	.....	.....
.....	.....	.....	.....	.....
Minor work end century.	Restored after 1562; part central tower; 1593 chapel Roquelle.	1651 top S. tower destroyed.	Many repairs.	Restorations.
.....	.....	.....	1786 crypt destroyed; church rebuilt.	.....
.....	.....	1646 ruined; 1653 rebuilding begun.	1719 done; 1755 consecrated.	Restoration.
.....	1577–85 almost ruined by Huguenots.	1673 rebuilt.	.....	.....
.....	1568 spire destroyed; other injuries.	.....	Some chapels removed.	Restoration façade.
1490–1500 built.	.....	.....	.....	Restorations.
.....	.....	.....	1721 rebuilt; W. portal.	Not now used as church.
.....	1506 W. spires fell.	1625 central tower injured.	1742 central spire; 1793 rotunda destroyed.	1885 central spire removed, 1893–94 new central spire; restorations.
S. porch.	N. tower.	Turret of S. tower.	Choir restoration; S. tower repaired; greatly injured.	Restorations.
.....	.....	.....	.....	.....
Repairs; W. front; chapels; part S. aisle vault rebuilt; upper part N. tower.	.....	1669 S. portal repaired.	.....	1828 cloister roof.
Chapel S. Anne.	1542 narthex; apse windows enlarged.	.....	.....	1852 W. tower injured; rebuilt.
.....	.....	.....	.....	.....
.....	.....	.....	.....	1806 demolished.
.....	.....	1610 built; 1655 tower building.	.....	.....
1475 transepts and central tower done.	1511–31 N. transept portal; nave chapels repaired externally; W. façade and towers rebuilt.	W. façade and towers continued.	.....	Restoration; 1875 total transformation nave.

	XI Century.	XII Century.	XIII Century.	XIV Century.
Forcalquier. S. Mary (sometime Notre Dame et S. Mary; popularly Notre Dame in XV century). 1065-1486.	.....	1149–1209 rebuilt;	1296 completed.	.....
Notre Dame (L'Assomption; popularly S. Mary XV century). From 1486.	.....	1196 earliest mention.	Chapel Sacré Cœur.	1371 consecrated.
Fréjus. S. Étienne.	Built XI or XII century.		Cloister; tower.	.....
Gap. Notre Dame (L'Assomption; l'Assomption et S. Arnoux in XVI century).	1010–29 built.	*c.* 1130 burned; rebuilt.	1271 part old cathedral demolished; new begun.	Lady chapel.
S. Jean-le-Rond (Chapelle des Penitents). Procathedral from 1866.	.....	.....	.....	.....
Glandèves. *See* Entrevaux.	.....	.....	.....	.....
Grasse. S. Marie, or Notre Dame du Puy (*Sancta Maria de Podio*). 1244-1801.	.....	Chiefly; may have been begun XI century.	.....	.....
Grenoble. S. Hugues (formerly S. Vincent). To X century. (Now right aisle of Notre Dame.)	.....	.....	Rebuilt.	.....
Notre Dame. From X century.	Porch and tower.	Columns and vaults of nave.	Nave vaults.	.....
Langres. S. Mammès.	.....	1150–1200 rebuilt; choir.	Nave done; apse windows repaired.	Cloister demolished.
Laon. Notre Dame. To 1801.	*Fragments.*	1112 burned; 1112–14 rebuilt; 1114 dedicated; 1150–70 choir, transepts, nave.	Chapels; chapter; cloister; apse; S. transept portal repaired.	Chapels; S. transept rose.
Laval. La Trinité. From 1855.	1040–70 built.	1110 central tower; 1180–85 transept; nave.	.....	.....
Lavaur. S. Alain. 1317-1801.	Rebuilt; *door baptismal chapel; N. buttress; vestiges of wall.*	.....	1211 ruined in siege; 1255 rebuilt.	Continued.
Lectoure. S. Gervais et S. Protais. To 1801.	.....	.....	Rebuilt.	1325 dedicated.
Lescar. Notre Dame. To 1801.	[980 rebuilt.]	.....	.....	.....
Limoges. S. Étienne.	1014 rebuilt; 1095 dedicated; *crypt.* [Lower part tower (not visible) is X century.]	Burned.	1273 rebuilding begun; choir.	1327 choir done; 1344 S. transept portal; 1378 Chapel S. Valerie.
Lisieux. S. Pierre. To 1799.	1026–55 rebuilt; *lower N. transept wall,* 1051 dedicated.	1135 burned; 1141–82 rebuilt; *nave, transepts, 2 bays choir, 2 chapels S. aisle.*	1208–19 rebuilding; 1226 fire; 1233 completed; 2 bays choir, apse, W. portal.	Nave chapels; S. transept window.
Lodève. S. Fulcrand. (S. Genès et S. Fulcrand.) To 1790.	[975 dedicated.]	.....	.....	Rebuilt.
Lombez. S. Marie. (Abbey Church of Notre Dame la Save.) 1317–1805.	.....	.....	.....	Chiefly.
Luçon. Notre Dame. (L'Assomption.) From 1317.	1068 burned; 1091 restored.	1121 consecrated; *N. transept façade, W. wall N. transept, parts S. transept.*	Nave; transept chapels.	1317-34 choir.
Lyons. S. Nizier. To VIII century.	.....	.....	.....	.....
S. Etienne. To XIII century.	.....	.....	.....	.....
S. Jean (Baptiste). From XIII century.	[New church apparently built around old.] 1080 repairs.	1107–18 rebuilt, choir, *chapels N. D. and S. Pierre;* 1165–80 continued; transepts; upper part choir.	1245, 6 bays nave done and high altar consecrated; N. transept tower; part S. transept tower.	W. façade; 2 W. bays nave; 1392 W. rose.

XV Century.	XVI Century.	XVII Century.	XVIII Century.	XIX Century.
1408 consecrated; 1480 tower; 1481 injured in siege; 1486 abandoned.	In ruins.	Sold; remains removed.	.....	.....
Chapel S. Sébastien.	1531 spire fell; 1573 spire rebuilt.	1601 central spire rebuilt; 1643–62 aisles.	.....	Restored by Abbé Terrasson.
.....	1530 S. portal.	.....	.....	.....
1484 chapel.	1582 practically ruined; rebuilt.	Continued; 1692 wholly ruined; 1693 repairs.	1702–20 rebuilt.	1866 demolished; rebuilt.
.....	Destroyed.	Rebuilt.	Made theatre.	Restored.
.....	.....	.....	.....	.....
1486 tower restored.	.....	1680–89 choir changes.	Changes choir, façade; 1719 crypt done; 1738 chapel S. Sacrement; 1742 tower destroyed; 1756 rebuilt; 1795 fire.	.....
.....	.....	.....	.....	.....
.....	S. aisle and chapels.	.....	.....	W. portal.
.....	.....	.....	1768 W. portal and towers.	.....
.....	1531, 1542, 1585, fires.	Chapel inclosures.	1794 spire N. W. tower demolished.	1843 belfry over W. gallery removed; restored by Bœswillwald.
1485 gable heightened.	Choir; 1575–97 N. portal.	1650 central tower burned.	1734 external stairway.	1847 W. transept and portal rebuilt; restoration.
1415 sacristy; 1469 W. of nave; towers.	1500 portal; chapels.	Restoration; 1669 upper part square tower.	Internal restorations.	Tower restored.
1488 tower.	1540 restoration; choir; foundations nave.	Restoration.	Restoration.	.....
Nave windows.	1537–54 sacristy.	1608 tower fell (façade rebuilt); 1627 N. transept door.	.....	Restoration.
Bay nave destroyed; 2 new bays; W. wall transepts; transept vaults; N. W. door; 1483 spire destroyed.	1515 façade N. transept begun; new works nave.	.....	.....	Extended restoration; 1876 W. façade begun by Bailly.
1430 Lady chapel; 1452 central tower restored; 1485–87 nave and S. tower restored.	Restorations; 1553 S. tower fell, rebuilt 1579; vaults and chevet flying buttresses repaired.	1677–89 internal changes.	1705 internal changes.	Restorations since 1841. Millet.
.....	Internal repairs.	.....	.....	.....
Tower.	.....	.....	.....	.....
Sacristy; cloister rebuilt.	1523 consecrated; 1550 aisle chapels; vaults repaired.	W. tower fell; W. façade.	1702 W. spire done; N. side chapels.	1847 spire fell; rebuilt; restored by Bœswillwald.
Rebuilt.	Crypt restored.	.....	.....	S. tower, W. gable restored.
.....	.....	.....	1796 destroyed.	.....
1413 upper part S. transept tower; 1480 top W. façade, 2 towers; gable; apse balustrade; chapels.	.....	Chapels.	1756 arch W. door.	1849 restoration; apse pinnacles and gallery balustrade; 1861 roof heightened.

	XI Century.	XII Century.	XIII Century.	XIV Century.
Mâcon. S. Vincent. (1.) S.S. Pierre et Paul; (2.) S.S. Gervais et Protais. To 1802.	1019-30 active rebuilding; nave vaults.	1096-1124 nave vaults done; *porch*; *lower parts towers.*	Nave and choir rebuilt; crypt.	Chapels; upper part towers.
Maguelone. S. Pierre. To 1527.	1030-54 rebuilt; 1054 dedicated.	1162 high altar consecrated; 1178 nave and W. portal rebuilt.	.....	.....
Maillezais. S. Pierre. 1317-1648.	Rebuilt; 1010 consecrated, *narthex, 2 towers, N. wall;* 1082 fire.	.....	1232 fire; rebuilt, chiefly choir.	.....
Mans, Le. S. Julien. (1.) Notre Dame et S. Pierre; (2.) S. Gervais et S. Protais; (3.) B. V. Marie, S. Gervais et S. Protais et S. Julien (1120).	*c.* 1055 rebuilt; 1067-85 fell; rebuilt; 1093 consecrated; *W. façade, aisle walls and vaults.*	1134, 1136 burned, repaired; 1120, 1158 dedications; 1150-58 nave; transept columns; S. porch; base tower.	1217-54 choir.	S. transept; crossing vault.
Église des Jacobins. Pro-cathedral 1768-71.	.....	.....	.....	.....
Marseilles. La Major. (S. Marie Majeure.) (Once S. Lazare.)	1050 choir vaults rebuilt; 1073 total rebuilding; *apse, tower.*	Apse chapels.	Chapels.	Chapels.
S. Martin. Pro-cathedral in 1802 and in 1854.	.....	.....	.....	.....
S. Cannat. (Les Prêcheurs.) (Pro-cathedral.)	.....	.....	.....	.....
S. Marie Majeure (L'Assomption de Notre Dame).	.....	.....	.....	.....
Meaux. S. Étienne. (Notre Dame et S. Étienne.) [Perhaps 2 separate cathedrals to 1005.]	Rebuilt; *crypt fragments.*	.....	Lower arches choir; windows and triforium N. transept; aisle columns; 1284 rebuilt; upper part choir and apse; chapels.	Middle and right W. portals; S. transept portal; chapels; transept gables.
Mende. Notre Dame. (Notre Dame et S. Privat.)	.....	.....	.....	1369 rebuilding begun.
Mirepoix. S. Maurice. 1318-1801.	.....	.....	1298 done.	.....
Montauban. S. Martin (formerly S. Auriol, S. Théodard, S. Andouard or Andard). 1317-1563.	Built XI or XII century; several restorations.		.....	.....
S. Jacques. 1563-1739. (Pro-cathedral.)	.....	Part tower.	.....	Nave; choir.
Notre Dame. From 1739.	.....	.....	.....	.....
Montpellier. S. Pierre. (Originally Church of Monastery of S. Benoît.) From 1527.	.....	.....	.....	1364 first stone; 1373 consecrated; *nave, 3 towers.*
Moulins. Notre Dame. From 1822.	.....	.....	.....	.....
Moutiers-en-Tarantaise. S. Pierre. (L'Assomption de la B. V. Marie et des Apôtres S.S. Pierre et Paul.)	Rebuilt; *aisles, choir, lower part choir towers, transepts.* [Remains W. towers perhaps X century, crypt earlier.]	1174 roof repaired.	.....	.....
Nancy. Notre Dame. From 1777.	.....	.....	.....	.....
Nantes. S. Pierre. (S. Pierre et S. Paul.	[Rebuilt X century.]	Rebuilt; *crypt, crossing, choir.*	1208 done, save choir tower.	Aisle chapels.
Narbonne. S. Just. (S. Just et S. Pasteur.) To 1801.	.....	.....	1270 rebuilding begun; choir.	1320 choir done.
Nevers. S. Cyr. (S. Cyr et S. Juliete.) (S. Gervais et S. Protais to 802.)	1028 rebuilt; *W. apse, lower part transcpts, crypt.*	1188 roofed; upper part transepts.	1211 fire; rebuilt; nave, first choir bay, 3 apse chapels; 1280 N. portal.	1331 consecrated; choir done; tower to lower gallery; chapels.

XV CENTURY.	XVI CENTURY.	XVII CENTURY.	XVIII CENTURY.	XIX CENTURY.
Chapel S. Paul; W. wall repaired.	Ruined by Huguenots.	Repairs.	Repairs; 1739 internal changes; 1799 demolished save W. towers and narthex.	1855 remains restored.
.....	.....	.....	1791 sold.	1875 restored to worship.
1475–81 transepts.	1518–42 chevet; 1587 ruined.	.....	1790 sold.	.....
1403–25 N. transept; S. tower; 1471 central spire rebuilt.	1506 internal restoration; 1583 central spire burned.	1648 roof repaired.	1767 interior decorations.	1822 stone spire destroyed; restorations.
.....	.....	.....	.....	.....
1416 choir vault restored; chapels.	.....	1646 S. portal restored.	Repairs; internal changes.	1811 upper part tower removed; restoration; 1856 demolition begun.
.....	.....	.....	.....	.....
.....	.....	Built.	Continued.	1880 done.
.....	.....	.....	.....	1852 first stone; 1855 begun; Vaudoyer, D'Espérandieu, Révoil, Érard architects.
Left W. portal; 1458–73 N. tower; part nave.	1530 N. tower done; nave decorations; chapels; sacristy.	1640 central spire removed; chapels decorated.	Internal changes; choir vault repaired.	Changes; rebuilding; restorations.
1437 choir consecrated.	1508–12 W. towers; 1580 destroyed save apse, some aisle chapels, bits of wall, W. towers; restored.	1600–20 rebuilt; 1620 consecrated.	.....	.....
1405–33 rebuilt; choir, chapels.	Continued; 1506 spire done.	.....	.....	1858–65 nave vault and roof done.
.....	1562 burned; 1563 demolished.	.....	.....	.....
.....	Vault rebuilt.	.....	.....	.....
.....	.....	1692 foundations.	1739 completed.	1831 W. towers removed; W. gallery.
.....	Ruined; tower destroyed.	1692 rebuilding begun.	1775 choir rebuilt.	1855–57 S. W. tower rebuilt; restorations; additions; new choir and transepts by Révoil.
1468 begun.	1508 completed.	....	.....	Nave by Lassus and Viollet-le-Duc.
1461 corner towers demolished; W. façade; vaults rebuilt.	.....	1642 aisles, repaired; 1668 almost wholly rebuilt, 1686 W. portal.	1794 vault and roof fell.	1826–28 nave, aisle and transept vaults; general rebuilding; 1864 W. portal; 1869 parish chapel.
.....	.....	1607 begun.	1703–42 rebuilt.	.....
1434 larger part pulled down; rebuilt; nave; 1473 W. porch.	Continued; 1595 fire in choir tower.	1628 nave vaults; 1657 S. transept.	1733 choir changes and decorations.	Continued; restorations; 1890 choir done.
Towers; chapter.	.....	.....	1708 first stone nave; 1772 work stopped.	Restored by Laisné.
Chapels; sundry works; 1490 S. portal.	1528 tower done.	.....	1770 choir changes.	1850–60 restoration by Ruprich-Robert.

	XI Century.	XII Century.	XIII Century.	XIV Century.
Nice. S. Marie de l'Assomption. To 1517.	Built.	.....	.....	Restored.
S. Réparate. From 1517.	.....	.....	.....	.....
Nimes. Notre Dame et S. Castor.	1030 rebuilt; 1084 restored.	*Parts of façade.*	Restored.	.....
Noyon. Notre Dame. To 1801.	.....	1131 burned; *c.* 1149 begun; practically done by 1200.	Chapels; cloister; upper parts towers; W. portals; 1293 fire; vaults repaired.	W. porch; chapels.
Oloron. S. Marie. To 1791.	Rebuilt.	W. portal.	W tower.	Choir; nave repaired.
Orange. Notre Dame de Nazareth. To 1799.	1085–1126 rebuilt; *portal.*	*E. end, lower part S.*	1208 consecrated.	Upper part S. portal; 1338 tower.
Orléans. S. Étienne. To IV century.	Rebuilt.	.....	.....	.....
S. Croix.	1000 rebuilt.	.....	1287 rebuilding begun; choir; *sanctuary; apse chapels.*	1328 consecrated; nave and choir done.
Pamiers. Mas S. Antonin. 1297–1499.	.....	Rebuilt.	.....	.....
S. Antonin (formerly Notre Dame du Marcadal). From 1499.	.....	Rebuilt; *nave portal.*	.....	W. tower; W. wall; rebuilding proposed.
Paris. S. Étienne. Jointly with Notre Dame to XII.	.....	.....	1219 removed.	.....
Notre Dame.	.....	*c.* 1135 repairs, *sculptures of door S. Anne;* 1163 rebuilding begun; by 1196 choir, ambulatory, parts transepts and nave done.	1208–23 W. façade; 1235 done; fire; 1240–45 repairs and changes; 1257 transept façades begun; 1260–75 nave chapels.	Nave chapels; 1351 wholly done.
Périgueux. S. Étienne. To 1669.	[Rebuilt end X century; *W. part.*	.....	.....	.....
S. Front. (S. Front et S. Étienne.) From 1669.	1047 consecrated.	1120 burned; restoration (perhaps rebuilding) to 1140.	Cloister vault rebuilt.	1347 Chapel S. Antoine.
Perpignan. S. Jean Baptiste. From 1602.	.....	.....	.....	1324 first stone.
Poitiers. S. Pierre.	1018 burned; rebuilt; 1021 consecrated.	1162 first stone present church.	1204 nearly done; W. façade.	W. façade; 1379 done, consecrated.
Puy, Le. Notre Dame.	2 inner bays porch; tower. [Part cloister X century.] Body of church is XI	2 outer bays porch; W. façade; part cloister rebuilt. and XII centuries.	.....	Chapter.
Quimper. S. Corentin. (Notre Dame et S. Corentin.)	*Fragments in chapel S. Sacrément.*	.....	1239 rebuilding begun; choir; chevet.	Chapels.
Reims. S. Pierre. (Primitive cathedral.)	.....	.....	.....	... .
Saints Apôtres (afterwards S. Symphorien). 314–401.	.....	.....	.....	... .
Notre Dame. From 401.	[Rebuilt IX century.]	.....	1211 burned; 1212 begun; 1242 consecrated; most done.	3 first bays nave; 1381 W. façade to King's gallery; N. nave chapels.
Rennes. S. Pierre.	.....	1180 removed; rebuilt; choir.	.....	1345 restoration; 1359 consecrated.
Notre Dame en S. Melaine. (S. Melaine to XVIII century; S. Pierre 1754–1844.) Pro-cathedral 1754–1844.	1032–54 *W. door; nave aisles; transepts; lower part tower.*	.....	Nave; choir; choir aisles.	Completed; upper part tower.

XV Century.	XVI Century.	XVII Century.	XVIII Century.	XIX Century.
1409 dedicated; 1462-1501 restored.	1531 destroyed.	.....	.....	.....
.....	1531 rebuilt.	1650 finished.	.....	1858 coupola fell.
.....	1567 destroyed save façade; rebuilt; demolished.	Rebuilt; done 1646.	.....	.....
Chapels.	Chapels; 1516-52-57 fires.	.....	Flying buttresses restored; apse towers destroyed; internal changes.	Restored by Selmersheim.
Nave chapels.	.....	.....	.....	.....
.....	1562 vault and tower destroyed; rebuit.	.....	1775 W. tribune.	W. portal.
.....	1562 demolished.	Rebuilt; fragments of arcade at No. 6 rue au Cloître.	1722 demolished.	.....
Transept aisles; central tower; some aisle windows.	1567 burned, save 2 W. towers, portal, chevet; temporary repairs.	1601 rebuilding begun; 1643-63 central tower and spire; 1676-85 roofs; 1691 central spire removed.	1708 base central tower removed, 1711 rebuilt; 1725 old towers removed; 1790 upper W. front and towers done.	1829 rebuilding done; 1858-59 central spire rebuilt, designed by Boeswillwald; restoration.
1486 monastery ruined.	.....	.....	.....	.....
.....	1577 ruined by Huguenots.	1657 rebuilt.	Interior decorations destroyed.	Restorations; decorations; tower gallery.
.....	.....	.....	.....	.....
.....	.....	1699 internal changes begun.	1726 roof covering, S. rose repaired; internal changes to 1771; 1773-87 external restorations; 1783 N. rose repaired; central spire removed.	General restoration by Viollet-le-Duc· 1859 central spire.
.....	.....	Nearly ruined by Huguenots.	Choir rebuilt.	.....
....	1581 N. porch repaired.	Large restorations; dome roofs.	.....	Total restoration by Abadie since 1865.
.....	1509 consecrated; chapel.	W. porch.	1742 iron spire of tower.	.....
1480-1500 upper parts W. façade and towers.	Repairs; stairway N. tower and spire.	Internal changes; roof repaired.	Internal changes; 1769 transept spire removed; chapels.	1849 restoration begun.
Chapel S. Joseph and porch.	.....	.....	.....	.....
1424 fresh activity; W. façade and towers; 1464 aisle vaults; 1487-93 transept and nave vaults.	Minor restorations; 1510 consecrated.	Lead spire; 1620 central spire burned.	1777 choir roof repaired.	1854-56 spires and restoration by Bigot.
.....	.....	.....	1710 worship discontinued; in ruins; 1793 removed.	.....
.....	.....	.....	1793 collegiate church S. Symphorien existed.	No remains.
1428 W. towers; 1481 fire; transept towers spires and balustrade destroyed; repairs.	Restorations; 1538-74 internal repairs.	W. portal and rose repaired.	1742-85 internal changes.	Balustrade restored; restorations by Arveuf, Viollet-le-Duc, Millet, Ruprich-Robert; Darcy.
1490 W. façade restored; chapels.	1532 choir decorations; 1541 foundations W. towers.	1640 centre part W. façade.	1703 done; upper parts towers; threatened to fall; 1754 closed; 1787 rebuilding begun.	1820-44 rebuilt.
.....	1516 restoration.	1672 upper parts tower dome.	.....	.....

	XI Century.	XII Century.	XIII Century.	XIV Century.
Rieux. Notre Dame. 1317–1801.	.....	.....	.....	1330 3 bays nave; additions to apse buttresses.
Riez. Notre Dame du Siège, *de Sede*. To IX century.	Rebuilt between 1090–1133.		.....	.....
S. Maxime. (S. Alban to VI century.) From IX century to 1520.	.....	.....	.....	.....
Notre Dame du Siège et S. Maxime. 1520–1801.	.....	.....	.....	.....
Rochelle, La. S. Barthélemy du Grand Temple. 1648–1687.	.....	.....	.....	.....
S. Louis. (S. Barthélemy to 1667.) From 1687.	.....	1152 built.	.....	*Tower.*
Église des Augustins (now des Ursulines). Procathedral 1722–1784.	.....	.....	.....	.....
Rodez. Notre Dame.	.....	.....	1276 old cathedral fell; 1277 foundations rebuilding; apse, first 2 bays choir, 11 chapels.	Last 4 choir chapels; 1385 tower done.
Rouen. Notre Dame.	Rebuilt; 1063 consecrated.	1170 *base N. tower, lateral W. doors.*	1200 burned; 1202 begun; 1220 most done; 1280 transept portals begun; aisle chapels.	1302–20 Lady chapel rebuilt; aisle chapels.
S. Bertrand-de-Comminges. Notre Dame or S. Marie. (Notre Dame et S. Bertrand.) To 1801.	*c.* 1080 rebuilt; *W. portal, W. tower, walls first 3 bays nave.*	S. and W. cloister.	E. cloiste	1304–50 rebuilt.
S. Brieuc. S. Étienne.	.....	*Some choir capitals.*	Begun before 1234.	Choir vaults; Lady chapel; sacristy; 1375, 1394 sieges.
S. Claude. S. Pierre. (S. S. Pierre, Paul et André.) From 1742.	Rebuilt several times prior to XIV.	.....	.....	Rebuilt; 1378–94 chevet; Chapel de Neuville; parts N. and S. walls.
S. Dié. S. Dié (S. Maurice to 1501). From 1777.	1005–49 rebuilt.	.....	.....	Injuries.
S. Flour. S. Flour. From 1318.	.....	.....	.....	1375 rebuilt.
S. Jean-de-Maurienne. S. Jean.	.....	.....	.....	.....
S. Lizier (Conserans.) S. Lizier. To 1667.	Apse rebuilt. [2 apse towers X century or earlier.]	Choir; transepts; lower parts nave; cloister; 1117 consecrated.	Cloister.	Rebuilt; upper part nave walls and vaults; buttresses; tower; W. portal.
S. Marie de la Sède or du Siège. (Jointly with S. Lizier to 1667.) To 1790.	.....	Chapter; lower part tower.	.....	Rebuilt.
S. Malo. S. Malo. (S. Malo et S. Vincent.) 1163–1801.	.....	Built.	.....	Part nave; transepts; choir; choir chapels.
S. Omer. Notre Dame. 1559–1778.	1052 first authentic reference.	.....	Choir; chapels; part transepts.	Nave; chapels; 1385 S. transept portal; 1397 nave rebuilding begun.
S. Papoul. S. Papoul. 1317–1801.	.....	Choir.	Nave, cloister.	Sacristy.
S. Paul-Trois-Châteaux. Notre Dame et S. Paul. To 1801.	Apse; transepts [Parts may be VIII century.]	Nave, W. façade to tympanum; S. porch.	.....	.....
S. Pol-de-Léon. S. Pol To 1802.	.....	Part N. transept.	Nave; W. towers; W. façade.	1349 nave vaults; chapels.
S. Pons-de-Thomières. S. Pons. 1318–1795.	.....	Chiefly.	.....	.....

XV Century.	XVI Century.	XVII Century.	XVIII Century.	XIX Century.
Consecrated before 1462.	1530 door under tower.	*c.* 1600 choir; sacristy; 1651 choir consecrated.	.....	.....
1498 demolished; foundations extant.	.....	.....	.....	.....
.....	1596 demolished.	1662 present chapel.	.....	.....
1490 first stone.	1524 *choir;* sacristy; tower. 1578–99 repairs, wood vault; 1594 sacristy; 1599 tower rebuilt.	Between 1628–52 *Bishop's chapel.*	Preparations for nave additions.	1842 ruined; rebuilt.
.....	1577 foundations.	1687 burned.	.....	.....
.....	1568 destroyed.	1668 rebuilt.	1742 new cathedral begun.	1849–62 completed; 1862 dedicated.
.....	.....	Built.	.....	.....
Choir done; part nave; transept portals; nave chapels.	Nave done; *c.* 1530 W. façade; 1510–26 tower rebuilt.	.....	.....	.....
1467 upper part N. tower; 1481 N. transept court; 1487 S. tower begun; 1488 transept portals done; repairs.	1507 S. tower done; 1509–30 W. front; 1514 central spire burned; 1523–44 rebuilt.	1683 3 turrets W. front fell.	Internal changes.	1803 repairs; 1822 central spire burned, vaults injured; restoration; 1876 central spire done.
Chapels.	Cloister repaired, XV or XVI century.	.....	.....	Cloister in ruins; roofed in 1888.
Repairs.	.....	.....	1705-20 partial rebuilding.	Restorations.
1465 first 4 bays done; cloisters rebuilt.	.....	.....	1726 completion begun: 1742 done; internal changes; 1799 fire; cloister destroyed.	Internal restorations.
Cloister; injuries.	Chapels; cloister repaired.	Sanctuary.	1711 W. portal.	.....
1466 rebuilding done.	.....	.....	.....	Restored by Mallay.
Rebuilt; 1452 cloister; 1474 choir done; nave aisles; chapels.	.....	.....	1772 façade.	1891 restored.
Minor changes; part cloister.	.....	1650–80 tower repaired.	.....	.....
.....	*c.* 1500 vaults, decorative columns; 3 chapels S. side.	1667 sole cathedral.	.....	.....
Central tower.	1530 S. aisle; 1593 N. aisle begun.	1607 N. aisle done.	1713 façade.	1859 central spire.
1442 S. transept portal done; nave; aisles; transepts done; chapels.	W. tower rebuilt, done 1521; cloister done; minor repairs.	1606 small tower fell; 1621 inner porch.	1713 small tower rebuilt; 1752 internal changes.	Restored by Bœswillwald; chapel Sacré Cœur rebuilt.
Tower.	.....	.....	.....	.....
.....	Repairs.	1600, 1630, 1683 repairs; 1634 dome rebuilt; sanctuary.	Central dome demolished.	1841 pediment W. front; restored by Questel.
1431–50 choir, transepts rebuilt; inner porch S. transept.	Chapels retouched.	.....	.....	Interior restored.
.....	.....	Restoration; E. façade.	.....	.....

	XI Century.	XII Century.	XIII Century.	XIV Century.
S. Servan (Aleth). S. Pierre. To 1163.	.....	1150 in ruins; choir remained.	.....	.....
Saintes. S. Pierre. (S.S. Pierre, Paul, Pancrace et Laurent in VI century.) To 1801.	1026 burned.	1117-27 rebuilt; 1185 consecrated.	.....	.....
Sarlat. S. Sacerdos. (S. Sauveur et S. Sacerdos.) 1318-1801.	Built.	Built; *tower.*	.....	In bad state; 1340-50 chapel N. D. de Pitié.
Séez, Notre Dame (S. Gervais et S. Protais to 1786).	1053 rebuilt.	1126 dedicated; portal; cloister.	1210 Lady chapel; 1230 rebuilt; choir; 1260 fire, rebuilt.	Dedicated before 1315; 1353, 1375 fires; extended rebuilding; choir buttresses.
Sénez. L'Assomption de la B. V. Marie. To 1789.	.....	1136-76 rebuilt.	1242 done; consecrated.	.....
Senlis. Notre Dame. To 1801.	.....?	1145-55 rebuilt; 1183 done save transepts and towers; 4 apse chapels; 1191 consecrated.	1240 spire done; part transepts; W. façade; chapels.	1304 fire; chapter; chapels.
Sens. Notre Dame; S. Etienne; S. Jean Baptiste. Three primitive oratories of III century on site of present cathedral.	.....	.....	.....	.....
S. Étienne.	[982 dedicated.]	1140-68 rebuilt.	W. façade; 1267 S. tower fell, injuries, fire; upper parts rebuilt; chapels; E. part S. aisle; 1279 top N. tower.	Nave and choir chapels; central spire and S. tower rebuilt; W. part S. aisle.
Sisteron. S. Thyrse. (Primitive cathedral; destroyed in first barbarian invasions.)	.....	.....	.....	.....
Notre Dame-hors-la-Ville (Notre Dame de Pomeriis, *des Pommiers*). (Notre Dame et S. Thyrse to 1343). To 1801.	1015-29 rebuilt.	.....	.....	.....
Soissons. S. Gervais et S. Protais.	.....	1160-70 rebuilt; S. transept after 1176.	1212 choir done; tower; N. transept.	Nave chapels.
Tarbes. Notre Dame de la Sède. (Nativité de Notre Dame.)	.....	Apse windows; transept.	N. rose.	Nave; transept cupola.
Tarentaise. *See* Moutiers.	.....	.....	.....	.....
Thérouanne. To 1566.	.....	.....	.....	.....
Toul. S. Étienne. To 1807.	[952 rebuilding begun.] 1070-1107 choir towers.	1107 choir towers done; 1148 dedicated.	Rebuilt; choir; transepts; cloister.	Nave; aisles.
Toulon. S. Marie Majeure. To 1801.	1096 rebuilt.	1119-54 restored.	.....	.....
Toulouse. S. Étienne.	1078 rebuilt; *brick side wall; 2 windows; caps supporting nave ribs; arcades inner W. wall.*	.....	1211 nave vaults; 1230 W. rose; 1272 choir begun; chapels.	Chapels.
S. Jacques.	.....	At first jointly with S. Étienne, but not known as cathedral in 1154.	.....	.....
Tours. S. Gatien. (S. Maurice to XIV century.)	.....	*c.* 1130 rebuilding begun; *fragments;* 1166 fire; 1170 rebuilt.	Rebuilt; 1267 apse and choir done; transepts.	Transept portals; 2 bays, lower part 5 bays nave, early XIV; 1375 central tower.
Tréguier. S. André. To 1801.	.....	N. tower.	1296 general restoration; *W. porch.*	1339 almost wholly rebuilt.

XV Century.	XVI Century.	XVII Century.	XVIII Century.	XIX Century.
.....	.....	.....	1709 parts wall and choir extant.	[Site occupied by modern chapel.]
1450 rebuilt; aisles; choir and nave chapels; tower; 1460 portal begun.	1503 portal done; 1523 consecrated; nearly ruined by Huguenots; 1582–85 rebuilt.	Continued.	1762 repairs; vaults rebuilt.	Restorations.
.....	1504 old cathedral removed; new begun; 1531 consecrated.	1697 repairs and restoration; choir changes; chapel N. D. de Bon-Encontre; sacristy.	.....	.....
1494 reconsecrated.	Changes; W. buttresses; N. transept, W. portals and towers restored; choir vaults fell; rebuilt.	Towers, roof, vaults, chapel repaired; wood dome central tower.	Bad condition; many repairs; 1 41 nave used.	1822 S. tower made height N. tower; restorations from 1848 by Ruprich-Robert; 1887 rebuilding choir done.
.....	1561–87 restored.	.....	.....	Vaults rebuilt.
1417 fire; restoration.	1502 serious fire; repairs; upper part rebuilt; transepts done 1556.	Repairs.	Repairs.	Restorations; central apse chapel rebuilt.
.....	.....	.....	.....	.....
Chapels; transepts; 1490–1500 S. transept portal.	1501–1515 S. transept portal; 1528–35 lantern S. tower; chapels.	Repairs.	1726 internal changes; 1795 central apse removed.	1842 N. tower cage removed; 1859 side chapels removed; nave walls rebuilt; restorations.
.....	.....	.....	.....	.....
.....	.....	Choir changes.	.....	.....
1443 repairs; 1479 done; consecrated.	.....	.....	Central and left W. portals repaired.	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	1553 destroyed.	.....	.....	.....
1460 W. portal begun.	1547 W. towers and portal done; 1552 choir towers removed; choir vaults rebuilt.	Repairs; 1624 sanctuary decorations.	Sanctuary changes to 1761.	1809 Church of S. Jean-du-Cloître demolished; rebuilt; restoration by Beswillwald.
.....	.....	1609, 1653 additions; nave; façade.	1737–40 tower.	.....
Choir triforium; 1449 W. portal begun; chapels; tracery in some nave windows.	1522–1533 repairs; apse buttresses; stair tower; choir triforium; W. tower done; chapels.	1609 fire; one bay vault; repairs; stair tower dome.	.....	1812 cloister removed; restorations.
.....	.....	.....	.....	1812 demolished; Chapel S. Anne built.
1425 central tower burned; 1430 nave done; W. façade; cloister; chapels.	1507 N. tower done; 1547 S. tower done; cloister.	.....	.....	Restoration.
S. porch; upper part transept tower; cloister.	.....	.....	Spire.	.....

	XI Century.	XII Century.	XIII Century.	XIV Century.
Troyes. S. Pierre et S. Paul (primitively S. Sauveur).	.....	1188 burned.	1214 rebuilding; choir; lower part transept; part vaults; central tower.	1365 central tower destroyed; transepts done; nave chapels.
Tulle. Notre Dame (formerly abbey church of S. Martin). From 1317.	.....	1103 rebuilt to vaults; W. porch; chapter chapel.	Tower; cloister; chapter.	Spire.
Uzès. S. Théodoret. To 1817.	.....	Rebuilt.	.....	.....
Vabres. S. Sauveur (formerly abbey of Notre Dame). 1317–1796.	.....	.....	.....	In ruins; rebuilt; *last 2 choir chapels; some chapel arches, S. façade.*
Vaison. Notre Dame. To 1801.	[Rebuilt 910]; tower restored; cloister.	.....	.....	.....
Valence. S. Apollinaire (B. V. Marie, S. Corneille et S. Cyprien; originally S. Apollinaire et S. Cyprien).	Rebuilt; 1095 dedicated.	.....	1281 upper part tower fell; rebuilt.	.....
Vannes. S. Pierre.	991–1037 rebuilt.	Rebuilt; 1149 done.	Tower	1310 chapel S. Jean Baptiste.
Vence. Notre Dame. To 1801.	[Enlarged and changed X century.]	Apse chapel of SS. Anges; double bays tower; aisles; roof cornice; all end XII.	.....	.....
Verdun-sur-Meuse. S. Pierre et S. Paul. To V century (Abbey S. Vannes from 952).	Rebuilt.	.....	Rebuilt.	.....
L'Assomption de la B. V. Marie.	1050 burned; rebuilt.	1131–58 rebuilt; 1148 dedicated.	Sacristy; aisle columns.	Pilasters E apse made buttresses; nave; chapels; 1390 nave vaults; window changes.
Versailles. S. Louis. From 1802.	.....	.....	.....	.....
Vienne. S. Maurice. To 1801.	1052 rebuilt.	Continued; 7 bays nave; 1107 consecrated.	*c.* 1200 choir; 1251 consecrated.	Aisle chapels.
Viviers. S. Vincent.	.....	Tower.	Nave.	Choir.

XV Century.	XVI Century.	XVII Century.	XVIII Century.	XIX Century.
1410-34 central tower rebuilt; 1430 consecrated; nave; 1462-68 N. transept portal repaired; chapels.	1500 nave and aisles done; 1506 W. portal begun; 1546 W. rose; chapels; W. tower to 1590.	1611-38 W. tower; injuries: minor repairs.	1700 central tower burned; vaults restored.	1841-2 S. portal reconstructed; 1868 sacristy; restorations by Millet.
.....	.....	.....	1786 minor internal changes; chapter restored; 1796 choir and transept destroyed.	1805 repairs done [transept and apse not rebuilt].
.....	.....	1634-63 restored; 1663 consecrated.	.....	.....
.....	1576 part destroyed; rebuilt; tower; N. chapels.	Restored.	Additions; W. façade restored.	Belfry; restoration projected.
.....	.....	1601 internal furniture.	.....	Restored by Révoil.
.....	1568-78 great Huguenot injuries; tower destroyed.	1604 rebuilding begun; 1660 tower rebuilt.	1730 internal changes.	1806 tower fell, 1820 rebuilt; 1838 towers removed; 1858 W. porch; 1864 tower done; restorations.
1453-1494 nave rebuilt, chapels; 1436 Lady chapel vaults; 1478 W. façade; 1484 W. porch done.	1504 S. transept; 1516 central tower removed; 1517 N. transept.	1630-37 chapel S. Vincent Ferrier.	1768 nave vaults rebuilt; 1770 choir demolished; 1771-4 rebuilt; 1776 choir vaults.	1824 spire fell, rebuilt; 1856 chapel S. Jean demolished; 1868 W. façade; 1875 W. portal rebuilt; restorations.
Internal changes; apse modified:	.....	.....	.....	1812 nave vault rebuilt.
1413 S. tower; rebuilt; rebuilding continued.	1543 nave done; chapels; S. tower spire fell.	.....	1793 abandoned.	1817 removed.
.....	1510-15 cloister; 1525 chapel l'Assomption.	1648 city became French.	1755 W. choir and all over vaults burned; repairs; W. towers before 1780.	Restoration by Bœswillwald.
....	.....	.....	1725 chapel built; 1743-54 church built; chapel removed.	1843 consecrated; Lady chapel restored.
4 bays nave.	1515 nave vaults; 1533 W. façade.	.....	....	1869 fire; N. tower injured.
.....	.....	.....	.....	.....

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The following list includes only works actually consulted in preparing the foregoing tables. A few important titles have been admitted as no copies are known in America. It is not a bibliography of French architectural history, for many works on this subject do not touch specifically upon the histories of the cathedrals. Neither is it a complete bibliography of the literature of the cathedrals. This literature is exceedingly rich, though the complete history of many of the cathedrals has yet to be written, and books referring to many others are wholly inadequate. Much of this material is to be found only in the publications of the French archæological societies, and is not referred to specifically, such publications being only mentioned by the serial title. It should be remembered, also, that the books in this list are of very unequal value, some of the most insignificant, however, being the only works on their particular subject, could not well be omitted.

Books containing references to more than one cathedral are placed in the general list. Special books on special churches are named separately. This division is made for economy of space alone, and without regard to the importance of the publication, for in a number of instances the more valuable book is a general one, not named under the town itself.

General histories of art, books without text and monographs on glass are omitted altogether.

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GENERAL.

I.

ENGLISH.

Works in English on the cathedrals of France are wholly inadequate. Most of them were published in the early part of the century and are without the value of the broader archæological scholarship of more recent times. There are no general or special works of any value, in English, relating to the cathedrals.

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THE ÉCOLE DES BEAUX-ARTS.

Second Paper.

THE architect, says Vitruvius, should know how to write and draw; he should be instructed in geometry, and not ignorant of optics; he should have a knowledge of arithmetic, and know a great deal of history; he should be deeply learned in philosophy and understand music, and have had some instruction in medicine, jurisprudence and astrology. The school is evidently of his way of thinking, for, besides all the professors of architecture, known as *patrons*, there is a professor for each of the following courses:* Ornamental Design, Perspective, General History, Mathematics, Descriptive Geometry, Stereotomy, Physics and Chemistry, Construction, Legislation of Building, History of Architecture, Decorative Composition, Literature, Archæology, History of Art and the Æsthetics, Drawing, Modeling and the Theory of Architecture. Of these, the Theory of Architecture is to the others in importance as the sun in comparison to the stars, and it is the Theory of Architecture which occupies by far the greater portion of the time of the student at the school. But in order to gain admission into the first-class, one must pass examination and receive honorable mention in the History of Architecture, Mathematics, Descriptive Geometry, Stereotomy, Perspective Archæology, Construction, Drawing of Ornament, Drawing of the Human Figure, and of Modeling of Ornament in bas relief. He may attend lectures on all the various subjects, and if he feel disposed to push his investigations in any one or more lines, unbounded opportunities are afforded. On the other hand he may never attend any of the lectures, and the school with proper discrimination will require of him only such a degree of knowledge of the subjects enumerated, as it considers absolutely indispensable for the architect to know.

With the exception of construction, which takes the best part of a year and

* Lemaistre, to whose excellent work we are indebted for the accompanying illustrations.

RENDERING.

is done chiefly in the *atéliers*, the work of securing these necessary mentions is done by the student at the school proper and at odd times between *projets*. The *projet* is the main affair with which he has to deal; it is by means of the *projet* that he learns the Theory of Architecture. Six *projets* are given to each class in a year; these are veritable competitions. They are issued alternately, one month to the first class, and the next to the second. The preliminary sketch (*esquisse*) is made at the school, and twelve hours are allowed *en loge*. The scenes enacted at the *esquisse* are very similar to those described at the examination in Architectural Composition, with the exception that the time before *déjeûner* is chiefly occupied in initiating the *nouveaux*, when there are any to initiate. These unfortunates are lucky if they escape with a whole skin and sound limbs; after the ceremony they are expected to treat their tormentors. The programme of requirements for the competition is handed each one upon entering. The sketch of the proposed building, by plan, elevation and section, drawn to a small scale, may be made somewhat roughly, but must not be too indistinct; it is accounted an evidence of skill to make the sketch as vague as possible without overstepping the forbidden mark, in order to leave room for subsequent study and change. The original sketch must be signed and left at the school, the student providing himself with a tracing to show his *patron*. If the *patron* approves he may render, that is, study the problem and make the elaborate drawings required; if not, he must wait two months for the next opportunity to try again. Meanwhile he may devote his attention to securing a mention in Archæology, Drawing, or some of the numerous other subjects necessary to his advancement toward the final diploma.

In working up the problem, the general lines of the sketch must be adhered to, but changes may be made in proportion and details. An experienced hand will make his *esquisse* just definite enough to avoid being placed *hors-de-concours*, but sufficiently vague to allow of considerable latitude of interpretation.

Besides these two months *projets*, there is what is called the *esquisse-esquisse*, that is a programme to be completed entirely *en loge* in a single day. These also occur for each class, at intervals of two months, so that both the first and second class have an *esquisse-esquisse* and a *projet* every two months alternately at intervals of one month.

As the *esquisse-esquisse* is made entirely without advice and without the aid of documents, it is much more difficult to obtain a mention for it than for the *projet* of two months; but for those fortunate enough to receive such a recompense for the *esquisse-esquisse*, then the work of this one day counts for as much toward advancement in the school as a mention on the larger programme of two months.

The regular occurrence of these *projets* of competition may be called the pulse beats of the institution. It is they which send the life blood of energy and emulation coursing through every member of the body in regular recurring bounds of increasing effort, from the preliminary *esquisse* to the final *rendu*. After the *esquisse* the student generally amuses himself for some weeks, or grinds on mathematics and other necessary matters until, realizing that the allotted time is slipping by, he sets himself seriously to studying the problem. When the preliminary studies are sufficiently advanced, and the *patron* satisfied with the result, the student proceeds to make on Whatman paper, the *rendu*, or the finished drawings, which must reach the school by twelve o'clock of the appointed day.

In the foregoing, frequent reference has been made to the *atélier* and the *patron*, two all-important institutions at the school. The word *atélier*, as understood by the student of the school, has no equivalent in the English language; neither has the word *patron* as applied to the chief of an *atélier*. The Government provides three free *atéliers* for architects situated on the premises of the school, each presided over by one of the most distinguished architects of France, who is known as the *patron*. The chief instructors in the other

branches are known as professors; but the master from whom one learns the great, fine art Architecture, is something more than a professor. To be the *patron* of a school *atélier*, he must have arrived at the top of his profession. They are almost invariably men who have won the *Grand-Prix de Rome*, and are government architects, often members of the Institute, and all engaged in the active practice of their profession. They visit their *ateliers* two afternoons a week to give criticism and advice. Besides the three free *atéliers*, which are called inside *atéliers* (*atéliers interieurs*) there are numerous outside *atéliers* (*atéliers exterieurs*) located in the neighborhood of the school, each under an architect of distinction In the latter a small monthly fee is charged which, however, need not be paid if the student does not render. The company in the outside *atéliers* is somewhat more *chic* than in the others, and the student receives more attention from the *patron*, as there are generally fewer pupils. The *patron* pays the rent and visits the *atélier* at stated intervals, and there his functions cease. All other affairs, both financial and administrative, are conducted by the students themselves. The latter are divided into two classes, *les anciens* and *les nouveaux*. The former govern and the latter obey.

The officers of the *atélier*, elected by the *anciens* from among their number, are a *massier*, or treasurer, who is the chief officer; he is generally a popular man and of ornamental appearance, as befitting one holding a post of such high distinction. It is he who does the honors of the institution upon state occasions; it is he who receives the *patrons*' cane and hat when he enters; it is he who sits at his right at the annual dinner and proposes the health of our beloved master. Being called to fulfill so many high functions, the ordinary affairs of the office are beneath his dignity; therefore, he has an assistant, called a *sous massier*, who does the dunning of delinquent members, and attends to the purchase of coal, oil, towels, soap, and the thousand and one other necessary supplies, but the *massier* keeps the funds in his pantaloons, as ours used to say.

The second officer is the *Bibliothécaire*, or librarian. As his, too, is an office of some distinction, he also has a *sous Bibliothécaire* who does the work. Then there is the *Caporal des nouveaux* who makes the *nouveaux* work; he is appointed from among their number.

The student pays the *patron* 20 francs ($4) a month, provided he renders. He must also pay to the *mass*, as it is called, or the fund in charge of the *massier*, 5 francs a month, whether he renders or not. Upon entering, the *nouveaux* pay to the *mass*, as an initiation fee, 65 francs. The *mass* also receives considerable sums from fines, of which there are an incredible number, but which seldom exceed 5 cents. All the expenses of the *atélier*, with the exception of the rent, are paid from the *mass*; any surplus remaining is devoted to the purchase of books for the library. Upon entering the *atélier*, one is a *nouveau*, and as such must render implicit obedience to every individual *ancien*. He must also fulfill other duties without special orders, such as lighting lamps, cleaning drawing boards, going to buy refreshments for the *anciens* at four o'clock daily, and a hundred other menial offices; on the *le dernier nouveau*, or the last newcomer, devolve all the most disagreeable tasks. The *dernier nouveau* is always asked to run of errands if he is present, and it is he who must pull the *charette*, or cart, with the drawings to the school on the day of the *rendu*. One may enter the *atélier* without having been admitted to the school, but he can never become an *ancien* until he has been admitted, and even then not until he has been a member for at least a year and rendered a certain number of *projets*. The choice of an *atélier* is left entirely to the student; thus he may choose for a master the man whose work is most congenial to his tastes.

Having passed my examinations and been received at the school, it became necessary to select an *atélier*. I had been in Paris now for some time and had determined for a variety of reasons to join the *atélier Blondel*, an outside

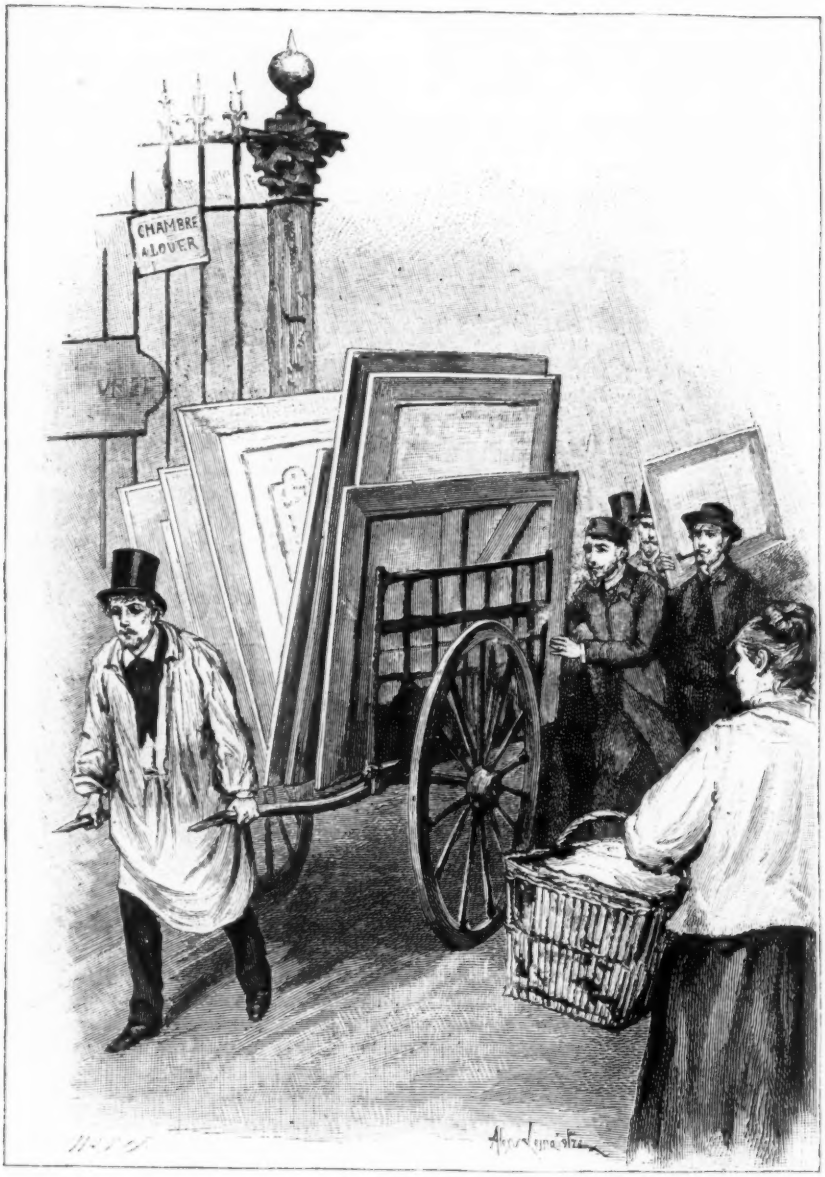
atélier in which there were no Americans. Monsieur Paul Blondel is a man with brilliant record and now in the prime of life; he had won every prize in the school, including the *Grand Prix de Rome*; besides his large practice he was architect of the Government. His *atélier* was one of the youngest in Paris, having been in existence only about five years, but during that time it had secured much more than its share of honors. Monsieur Blondel had the well-deserved reputation of taking more pains with his pupils than any other *patron* in Paris. His own work was stamped with that character, manly refinement and elegant originality which one sees in the works of Duc, whose friend and ardent admirer he was.

I presented myself at the residence of Monsieur Blondel, that being the custom, and asked permission to enter his *atélier*. He received me kindly, asked many questions, and finally told me to call next day at one o'clock, when he would take me to the *atélier* and introduce me to my future comrades. Accordingly the next day I enter the *atélier*, in company with the *patron*, and find myself an object of critical regard by about thirty young men who have on long yellow gowns exceedingly dirty. The *patron* announces to the company that he has brought them a new comrade, an American, but does not attempt to pronounce my name. He then proceeds with his regular round of inspection, going to each student in turn. The rooms are extremely quiet, not a sound is heard; if anything is said, it is in an almost imperceptible whisper, and I, *nouveau* that I am, form an entirely erroneous impression of an *atélier* and think it a quiet place. I do not realize that the deity of the *atélier* is present, and that this hush is out of respect for the man whom everyone present, with the exception of myself, regard with feelings of admiration bordering on reverence. I find myself with nothing to do but to take in the surroundings; everyone seems to be intensely occupied. The *atélier* consists of five or six rooms of liberal dimensions, and had formerly been an apartment. They are decorated below the ceiling with a sort of frieze in black and white, being the silhouettes of all present and former pupils arranged in the order in which they had entered. There is also the silhouette of Bub, the dog of the *atélier*, a sad-looking mongrel, at present reposing under the stove. On the walls are several magnificent *rendus*, which were made by the *patron* at Rome, and also casts from the frieze of the Parthenon, and a number of pictures and drawings of questionable morality. Not knowing exactly what to do, I decide to go home, but I am not to get off so easily. Before I reach the door, I am intercepted by a portly young man, *Delorme* by name, called *Philibert* by courtesy, *caporal des nouveaux*. He introduces himself politely, and asks if I am aware that it is the custom of the *nouveaux* to treat the *atélier* to drinks. I signify my willingness to comply with the custom.

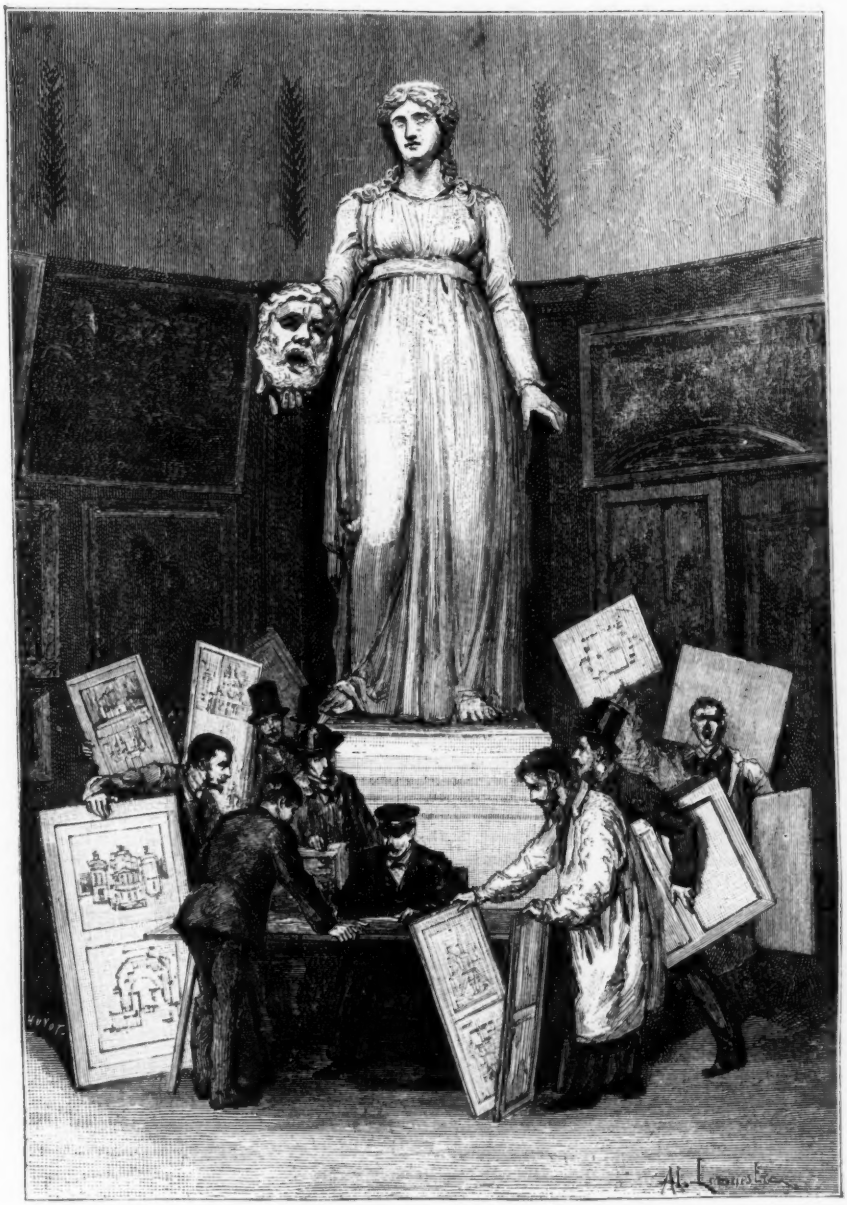
"Not now," he says; "you understand there are not enough present; I will put up a notice so that all may be here." He also says, "I can spheke English, steamship, plum pudd*ing*, vater clo-*set*, oh ye—yes, God damn."

He then relapses into his native tongue and tells me to go into the kitchen and help the other *nouveaux* stick paper on *chassis* or stretchers, of which there are to be provided thirty-five enormous ones for the approaching *charette*. I am asked if I can work that evening and am told to be on hand sharp at seven o'clock the next morning. The first class are rendering and the next day is the *charette*. *Charette* is a word very much used in the *atélier*, where it has a variety of meanings unintelligible to the uninitiated. The *charette* is the hand cart used to carry the drawings to the school. In the process of time the word has come to be applied to the last days of the *rendu*, and as it always happens that every one is behindhand at that time the phrase *en charette* in *atélier* parlance means behindhand with one's work.

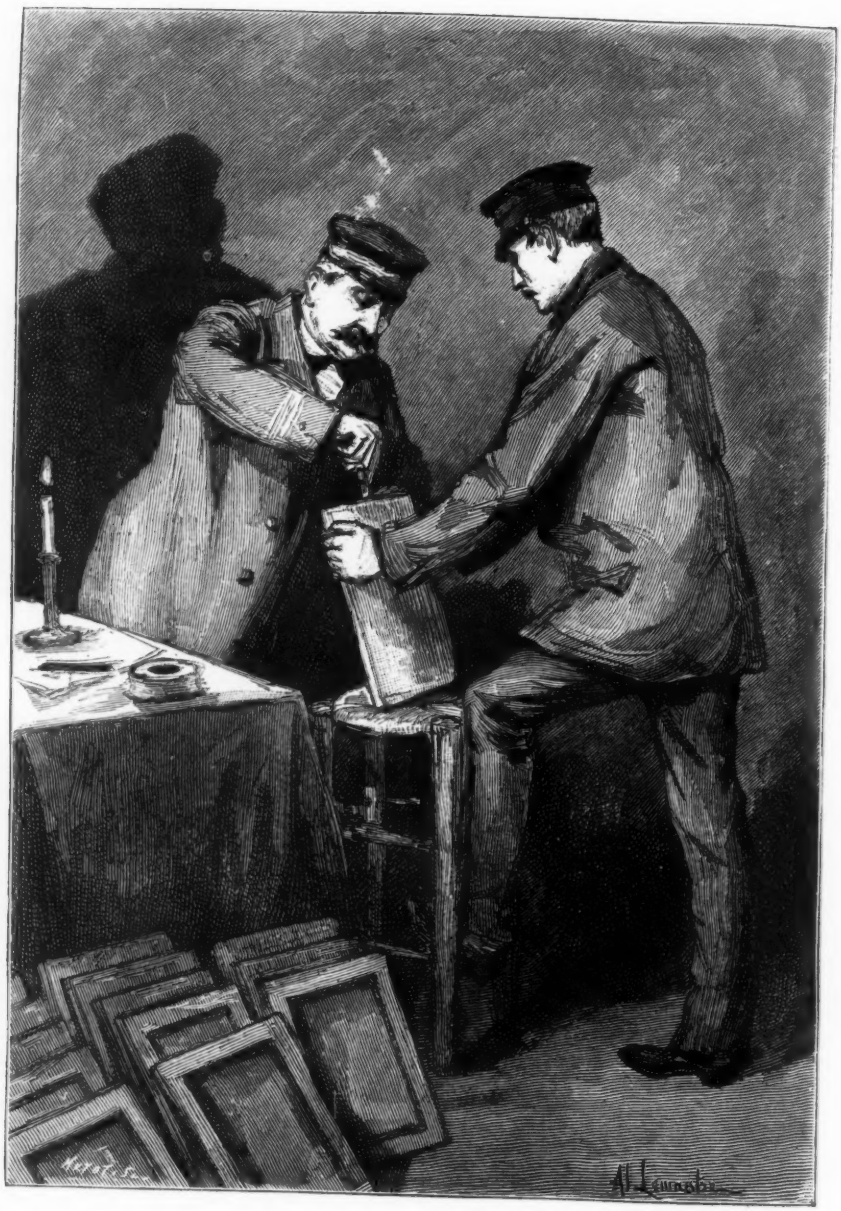
I reach the *atélier* early the next morning. Lo, what a transformation! It is my first experience with a *charette;* things appear in inextricable confusion and all is bustle and excite-



LA CHARRETTE.



INSCRIBING THE PROJETS.



STAMPING THE SKETCH

ment. The whole force of the *atélier* has turned out, drawings are being stretched on frames, borders painted, blue bands being pasted on and the last finishing touches given; on some single drawings, which are behindhand, there are three, and even five men working. Early as it is the *patron* is present giving his final orders; he has been there since six o'clock; he soon finishes his rounds and the confusion increases tenfold, for every one begins to talk. The men who are rendering look haggard and worn out; many of them have worked all night; some have worked forty-eight hours continuously. Yesterday afternoon not one of the thirty-five great drawings was finished; to-day at twelve o'clock all must be completed, mounted on frames and delivered at the school. In spite of the apparent confusion the work goes on with a precision and neatness which excites my admiration and I realize that the *atélier* is a splendidly trained organization. As the drawings, one after another are completed and stood against the wall they present an extremely fine and workmanlike appearance, well worthy of the pupils of Paul Blondel, who holds a reputation for technique second to no man in France.

I, being the *dernier nouveaux*, and another *miserable* are ordered to go for the *charettes*. We go to a stable where hand carts are rented, and each haul one to the *atélier*. The drawings have been brought down to the court and are quickly loaded. I am harnessed into the shafts, other *nouveaux* push, and the whole motley crowd start on a run for the school. It lacks but ten minutes of twelve, and at twelve the gates will be closed. Half of the men have not taken the trouble to divest themselves of their gowns. The *anciens* wear their straight-brimmed silk hats—a curious spectacle we present as we dash through the crowded streets, and one which affords no small amusement to the public. As we turn into the *rue Bonaparte*, we meet *charettes* from other ateliers, and noisy greetings are exchanged. The drawings are taken to the *Salle Melpomene* where *Monsieur Barbier*, sitting at the feet of the goddess, makes the proper entry in his register while his assistant affixes the official stamp. When the last drawing is registered, the whole *atélier* proceeds to the *café aux deux Magots* to drink *Vermouth* at the expense of those who render.

Having disposed of the *projet* a period of relaxation ensues, and *les anciens* have time to devote their attention to the initiation of *les derniers nouveaux*, of which there are nine, a number unprecedented in the history of the *atélier;* so it is determined to have a celebration somewhat out of the ordinary. Some one says it will be monotonous to go nine times in state to drink at the expense of each representative *mulot*, and suggests that it would be more pleasant and amusing to combine their resources and give a grand dinner in the *atélier*, after which could follow the initiation, or reception as they call it.

The management of the affair was rashly intrusted to the *nouveaux* who were to pay, with the result that probably a worse dinner was never served up to man. The food was sent from one of the cheapest restaurants of the Latin quarter, where cheap restaurants abound. The dinner was to consist of soup, three courses, a plum pudding, which they told me was in honor of America, wine and coffee, the whole to cost something over one franc per head. To say that the food was bad does not express it, and as for the wine, the smell was enough when it was poured out, the dregs filled at least a third of the glass.

My share of the expense was so ridiculously small that I felt I could afford to send some bottles of champagne, and the *patron*, whose son was to be initiated, sent a few more. The whole day was spent in decorating the *atélier;* the largest room was cleared, and the great drawing boards were arranged to form tables; the stools were to do duty as chairs. Hardly were the company seated, when every bottle of champagne disappeared from the board, each seized by the man nearest to it and deposited under his stool, in the cellar (*dans la cave*) as one expressed it. In spite of the food, a jollier company was never assembled and,

strange to say, every one but myself seemed to relish the viands.

The three courses were served without change of plates; when these were finished, the plates were turned over and the backs used for the pudding. Besides having to foot the bill, *les nouveaux* were required to wait on the table, and it was only after *les anciens* had finished that they were allowed to regale themselves on the cold remnants of the feast. One poor white-headed *nouveau* sat next to the burly Philibert Delorme, *Caporal des Nouveaux*. To such a state of intimidation had this young man been reduced that he dared not even remonstrate when that worthy functionary, at the end of every glass, deliberately poured out the dregs, a good third, on the top of his head.

The ceremony of initiation varies with the humor of *les anciens*. It usually consists in undressing the victim, and painting his body with a variety of strong colors, Prussian blue and lamp black being much esteemed for the purpose. In this condition the *nouveau* is required to mount on the table and sing. This time the first *nouveau* operated upon, not only sang, but he made such a long address that the whole company became heartily tired of him, and it was with difficulty that he was driven from the table *Les anciens* had had enough, and to my relief, instead of proceeding with the others they devoted themselves to song.

I found this part of the entertainment more to my liking, for the music was excellent. The first song was in imitation of church music and apparently would have done honor to the nave of Notre Dame. The voices were fine, and as the stately chords rolled out I closed my eyes to the uncouth surroundings as I listened. Then I wondered no less at the majestic beauty of the refrain than that such music should be heard in such a place, for I did not suspect what I afterwards learned, that the words which accompanied these glorious sounds were a tissue of blasphemy and immorality of a kind dear to the heart of "*les types d'atélier*."

The social life of the *atélier* is an experience which no one can adequately describe and no one appreciate who has not tried it. It is a life altogether unlike anything to be found in lands where English is spoken. The character of the members, if not moral, is at least happy. Nothing dampens their spirits and nothing disturbs their good humor. Work goes on merrily amidst a continual flow of good spirits. No matter how much pressed and driven, everyone seems to enjoy life. Something of interest is always happening. Music is the favorite diversion. I was surprised to find that nearly every one could play on some kind of an instrument, and there were several who could play on a half a dozen different kinds. Indeed the *atélier* had a veritable orchestra. There was a piano hired by subscription, five or six violins, a bass viol, drum and a number of wind instruments, and withal no lack of music, for it may be said some one was playing all the time except during the visits of the *patron*. Many had fine voices and when the *atélier* was not *en charette* one often heard music well worth listening to.

That these young men have bad traits cannot be denied, but to offset them they have good qualities of a very lovable kind, there is a loyal feeling of comradeship among them, also an utter lack of selfishness. The generous way they work for one another is surprising to one of Anglo Saxon blood, who as a rule does not feel called upon to work for days and often even all night long for a comrade behindhand with his work, but such devotedness is of continual occurrence at the *atélier* where it is considered a matter of course. They belong to a kind-hearted race, polite because it is natural for them to be so; their politeness is no affectation, but the reflection of an instinctive respect for others' feelings; and I, who entered the *atélier* with prejudice and dislike, left it in a far different frame of mind, desiring no better or truer friend than a true-hearted Frenchman, and I found many such among my forty odd "*Camarades d'Atélier*."

Ernest Flagg.

ARCHITECTURAL ABERRATIONS.

No. 10.—THE NEW CRIMINAL COURT BUILDING, NEW YORK.

IT is rather curious that, in the excess of discussion that has attended the competition, for the design of a new City Hall, and followed the collapse of that competition, no notice should have been taken of the one ambitious architectural project that has actually been carried into execution under auspices practically the same as the auspices under which the competition for the City Hall was conducted. That project was the project for the new building for the Criminal Courts, and an attentive consideration of it would have let in a great light upon the methods of our municipal officials in providing public architecture, and the degree of success that is likely to attend those efforts. It is true that in the case of the building for the Criminal Courts our municipal rulers did not invoke expert aid at any stage of the process, whereas in the project for building a new City Hall they invoked such aid at every stage. The Mayor says they invoked too much, and it seems as if they must either have done that or invoked the wrong kind; or else the competition would not have turned out to be so complete a failure. But this conclusion is hasty. The initial iniquity of the whole procedure was the determination to pull down the old City Hall, the one public building New York possesses that is at once architecturally respectable and historically venerable, in order to make room for an architecturally unknown quantity. The demolition and erection would additionally sacrifice what is left by the Postoffice and the minor buildings, including the Tweed Court House, of the old City Hall Park. This iniquity was not perpetrated by the consulting architects. It was imposed upon them as a necessary condition in the preparation of their scheme. Doubtless they were as well aware of the iniquitousness as any other equal number of enlightened citizens. It does not appear, however, that they protested against it. It does appear, however, that they drew up a very intelligent and liberal programme, which was calculated to attract all the architects who could be drawn into any open competition whatsoever. If the whole business, site and selection included, had been intrusted to them, the competition would doubtless have been successful in the selection of a creditable design to be executed in City Hall Park. That would have been a municipal misfortune. It was averted by the thoughtfulness of the officials in reserving to themselves the final selection, and by their inability to make a final decision out of the designs chosen for

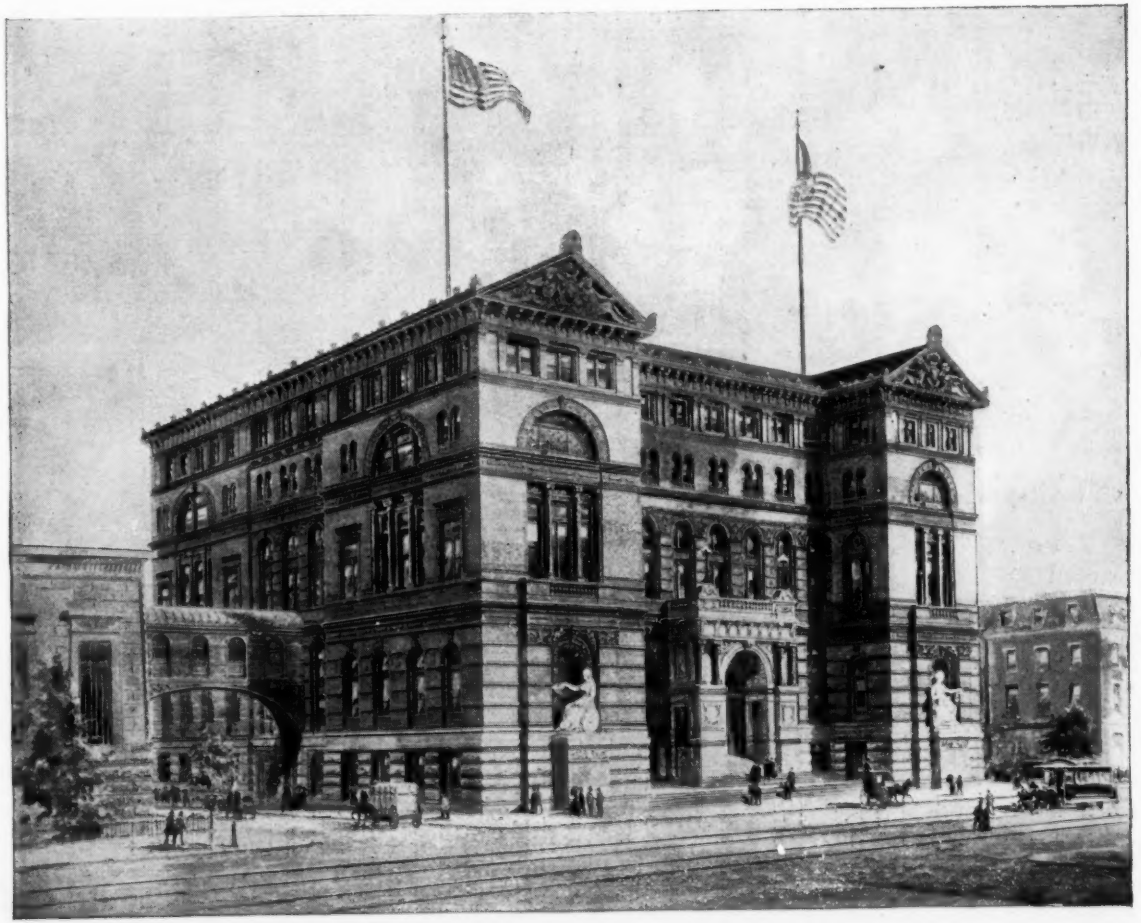
them by their professional advisers. One of the advisers explained afterwards that the officials were at liberty to disregard this choice and take their pick out of the whole number of designs submitted. In this case what were the expert advisers employed and paid for? If he had explained this beforehand, it is quite possible that none of the designs chosen would have been submitted at all, since these designs were presumably by architects of standing, and since it is inconceivable that an architect of standing would have prepared a design to be submitted to the unaided judgment of the municipal officials, on the chance that the municipal officials might like it.

But that the failure of the official authorities to make choice of a design is not in the least a reflection upon any of the premiated competitors, is vividly clear from the designs of which the official authorities did make choice when the question was of a new Criminal Court building. If the officials of New York like that, any artistic architect may very justly say to himself, Heaven forbid that they should like my work. As a matter of fact the competition which has resulted in the erection of the Criminal Court building did contain some respectable though misguided architects. How a respectable architect (professionally respectable, of course,) could have allowed himself to imagine that a design which represented what he could do stood any chance of being accepted is one of the mysteries of competitions. Perhaps each competitor believed himself the happy possessor of a "pull," in which case none of them deserved better than to have the existing building erected.

It is the unfortunate City of New York that is really entitled to our sympathy. We cannot fairly say that it has deserved anything quite so bad as this building. Fortunately for the city, the site of the new building is at present obscure and little frequented. Few persons have occasion to resort to it, except judges and criminals and criminal lawyers. The judges do not care about these things; the criminals dislike it, not because it is an ugly and vulgar building, but because it is a court of justice, and would dislike a better building quite as heartily; the criminal lawyer, if they be of the shuyster class, doubtless like it, from natural affinity. The great majority of the population are happily spared all knowledge of it. The "Elm street improvement" if it is ever brought to pass, will bring the Criminal Court Building into the sunlight of publicity, a fact which furnishes an argument against the execution of the Elm street improvement.

Upon the whole the Criminal Court building is the most discreditable edifice the city has ever erected. Everybody knows who knows about the matter that the municipal architecture of New York in its ordinary manifestations of school-houses and police stations and engine houses is nil. The city has been in the habit of intrusting its work to builders of tenement houses, who have built tenement houses for its purposes. It has had no architecture at all. This building looks as if it might have been designed by a builder of "tasty" tenement houses, with huge, umbrageous zinc cornices, but as if he had been goaded by his new and enlarged job into an architectural ambition. The common building of the city is an architectural vacuum, but this, to follow Mr. Hewitt, is the minus quantity on the other side of the vacuum. The absence of architecture here becomes positive, militant and obstreperous, insomuch that it is not possible to overlook the structure, when once it has encountered one's notice.

The building is full of "features" like all buildings in which an incompetent designer finds himself goaded to do something important. They succeed in converting its dullness into restlessness without relieving the dullness. The most painful of these features are the big porch in front of the centre, and the two openings on each flank, and the one in the front of each wing that run through two stories. These latter are so very painful and awkward that the charitable observer is disposed to believe that they result from an innocent though unskillful endeavor to express a galleried room. When he penetrates



New York. THE NEW CRIMINAL COURT BUILDING.

the interior he finds that this is not the case. The big semi-circular windows come to the floors of the rooms which they illuminate, and are just "architecture." We rather suspect the designer of an intention to plagiarize the Lenox library, in the general form of his building, but this suspicion may be unfounded, since it imputes to him a capability for admiring simplicity and dignity, an imputation which his work does not in the least justify. But a comparison of the two buildings is nevertheless instructive as showing how widely two somewhat similar ground plans may come to differ in the working out, when one is worked out by an architect and the other by an artchitect.

The cultivated observer will see from the illustration that the building is extremely bad, though he will not make out its full badness from the illustration. Nothing could be more distressing than the general scheme of two narrow-gabled and projecting wings flanking a wide-recessed centre. It is conceivable, of course, that this arrangement might be forced upon an architect by the exigencies of his ground plan, in which case an expressive treatment might have atoned for, by making intelligible, a disposition that would not occur to any instructed or sensitive person as an ideal form. Here, however, there is no reason in the plan for the arrangement, the interior, behind the recessed centre, being a recessed court, while the exterior effect of the two terminal slices is most painful. Still, even with this ground plan something might have been done, by setting the superstructure on a massive basement of moderate height, and crowning it with an attic containing the subordinate rooms. Instead of this the basement is carried up so as to include one of the principal stories, and thus enters into active competition with the superstructure. In fact, it is impossible to say which is the principal division of the building. Proportion is thus put out of the question.

We have said that the illustration fails to expose the building completely. For one thing it does not render the color, which is peculiarly atrocious, being a combination of light granite, brownstone and a brick the color of which is acutely painful in connection with the brownstone. What is more important is that it is on too small a scale to exhibit the detail, which very greatly aggravates the effect of the general disposition and the multiplication of the features. It is all as crude, as unstudied and as illiterate as possible. It would vulgarize the Parthenon. It is superfluous to add that the designer has taken great pains to make the stone-cutting curious and emphatic. Such is the custom of the artchitect.

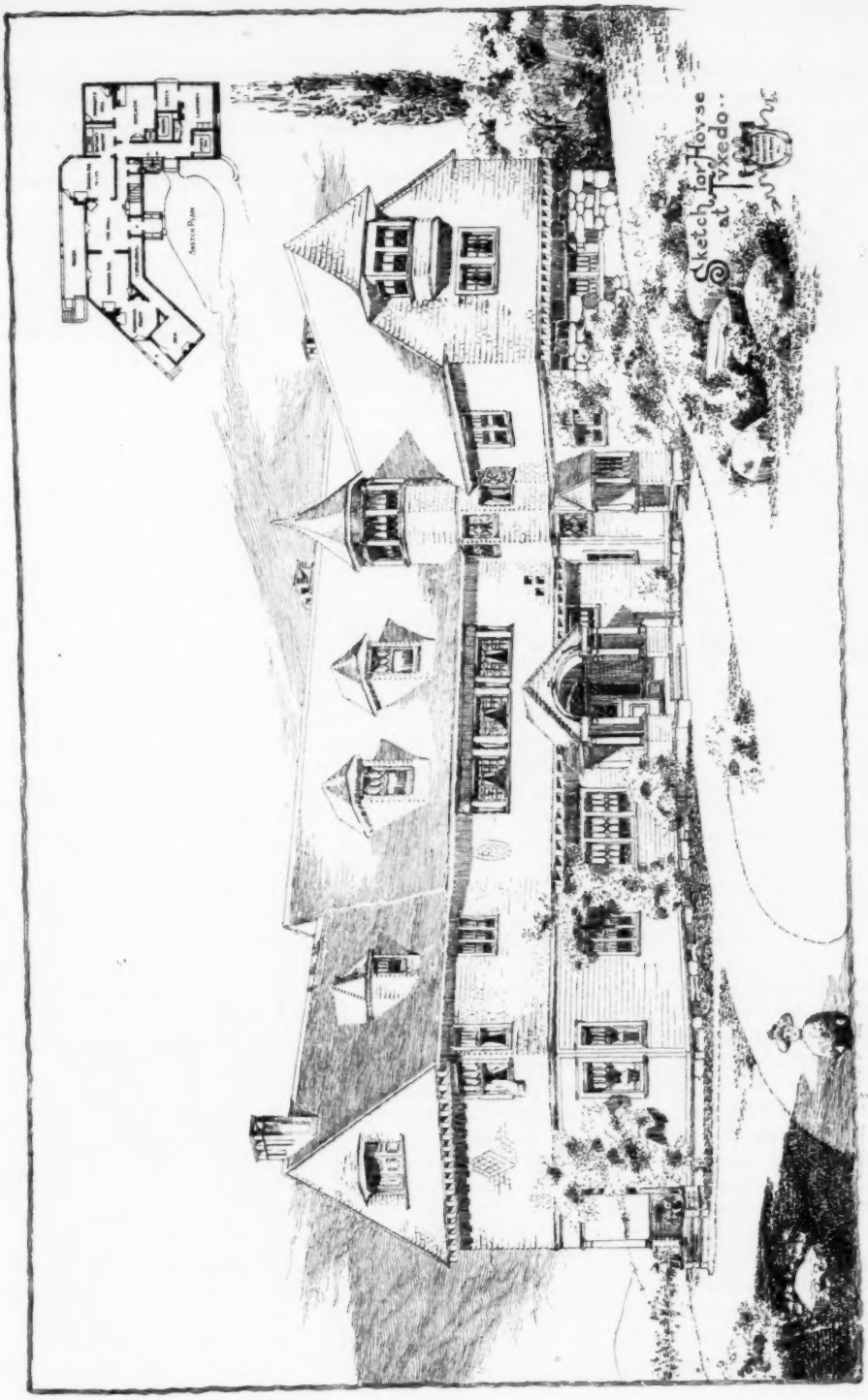
If this abominable edifice were built in Oshkosh we should, in our superciliousness, call it Western. It is what is to be expected where architectural design is reckless, hasty and uninformed. It may be seriously questioned whether there is anything in the West so Western as this. Anything more Western there could not be. And this is the monument chosen by the municipal rulers of the richest and biggest and one of the oldest of American cities. The Tombs alongside of it, built two generations ago, takes on an aspect of new distinction since the advent of its disorderly neighbor.

ADDITION TO THE BUCKINGHAM HOTEL.

New York City. R. W. Gibson, Architect.

BOLKENHAYN.

Fifth avenue and 58th Street, New York City. Alfred Zucker, Architect.


Sketch for House at Tuxedo.

WASTED OPPORTUNITIES.

No. III.

WE present to our readers for comparison a plan of the building on the north-east corner of La Salle and Monroe streets, in Chicago, just being completed, with an alternative plan and schedule of differences. We wish to again call attention to the fact that we do not wish to be considered as casting any personal reflections on the architects, nor doing otherwise than calling attention to the difference in the treatment of the building, considered purely as an office building, there being doubtless conditions incidental to its use, which lead to the treatment in this particular way. We would also refer to the prefatory paragraphs in our two prior articles explaining our position.

An office building's prime and only object is to earn the greatest possible return for its owners, which means that it must present the maximum of rentable space possible on the lot, with every portion of it most fully lit. The points to be considered are:

(*a*). Ease of access.
(*b*). Good light.
(*c*). Good service.
(*d*). Maximum of rentable area consistent with true economy.
(*e*). Ease of rearrangement to suit tenants.
(*f*). Minimum of cost consistent with true economy.

The building as it stands is approximately 80 feet by 142 feet, with the west front on La Salle street, the south front on Monroe street, the north front on a narrow alley, and the east end against a party wall. It is twelve stories high, with the principal entrance running from one street through to the other, the peculiar column arrangement being intended to admit of a monumental staircase on the first floor, between the two sides of which all persons entering must pass. The building is of the most approved type of steel skeleton construction, with each floor carried independently directly to the columns, but is without special sway-bracing, that being attained by the use of rigid column connections, assisted by the relative lowness of the building. On the ground floor a large hall enters from La Salle street and runs through in front of the elevators, with a wide entrance from Monroe street, the two entrances dividing the rentable space into practically three parts. On the second floor the large hallway of the La Salle street entrance is carried through and the court on the alley is floored over, giving three offices. From the third floor the office subdivision begins. In the typical floor plans there is a vault built in for each office and also a coat-closet, both occupying rentable area, which is credited to the office in our schedule. On the twelfth floor are placed the barber shop and toilets, running from the elevator east along the light shaft and then northerly

along the easterly wing, occupying a total of nearly 1,000 square feet. Every office is provided with a wash-basin, which is good.

(*a*). *Ease of access.*—There is practically no difference between the two plans, since it is feasible to have an entrance on La Salle street as well as on Monroe on both plans, although in the plan suggested the natural position of the entrance would be from Monroe street, as that would afford a perfectly lit hall at all times. The size of the elevator cars are somewhat smaller in the suggested plan, but they are still of sufficient size to perfectly meet the requirements of the building, while they can be considerably enlarged without curtailing the rentable space, should that be desired. The freight elevator is entirely removed, as being a fixture wholly unnecessary in an office building. Should it be felt that one was necessary, it could be placed in the stairwell. The location of the stairs is such that they can be preserved intact at all times regardless of a fire on any floor, it being possible to close them off by automatically closing fire-proof doors. The requirements of the stairs being simply to act as a relief in the event of a breakdown of the elevator plant, and therefore to be called but occasionally into use, their position is one of little importance, and the further away they can be placed the cheaper can their construction be without affecting the general tone of the building. The average distance of travel from elevator to office is rather less in the proposed plan than in the plan executed, but not sufficient to make it an object of very great importance one way or the other.

(*b*). *Good Light.*—The generally accepted requirement of good lighting is that every portion of the office should be within 20 to 25 feet of a window, and that that window shall not open directly to the south. It is to be hoped that some time the disadvantages due to a direct south light in offices will be fully appreciated, and the advantages of the court, with its long axis north and south more fully understood. We have gone into deep offices on a light day with a southern exposure, and found electric light in use therein, simply because it was impossible to permit the direct sun to shine on the occupants close by the windows, and as a consequence awnings were used, which made it necessary to use artificial light in the rear. The office day is only one-third of the twenty-four hours, and is fairly well distributed on either side of the meridian, with the advantage a little in favor of the westerly side, and therefore it is desirable that the long axis of the court should be a few degrees east of a north and south line, so that the sun's rays can penetrate to the deepest part of the court during the middle of the day, and reflect as deep as possible into it during all the other portions of the day. In the building under consideration, the plan as it is shows eight of the offices facing the south, which, as we have seen, is a disadvantage. There are four offices which face the west, and the remaining five are within a court whose long axis is east and west, and therefore there is not much likelihood of there being direct sunlight in the offices at all; at the same time there is not much likelihood of the offices being as satisfactorily lit as they should be. If the court were put in as shown on the plan, as it should be, there are but four offices which directly face the south. The light court, which is 25 feet wide in one case and 12 feet 6 inches wide in the other, opens directly on the street, and, as a consequence, every office of the twenty-eight, save three, may be considered as fronting on the street, since from every one the street is visible until the stories in close proximity thereto are reached, when their value is enhanced by reason of the superior light and nearness to the street. Whether the portions of the building are rented separately or in large areas, the light throughout every portion of the space rented will be amply sufficient, and this is secured, as will be seen by the schedule, at no loss of rentable area. A further advantage of the north and south court and the particular arrangement presented is that the prospective tenant carries with him, from the time he enters the build-

ing until he leaves it, the feeling that it is light, that it contains no dark corners, and that this effect is gained without artificial aid. The acknowledgment of limitation of light from a window is had in this plan, where it will be seen that the architects have provided for offices going back only a distance 21 feet 6 inches, with the rear of 4 feet condemned for all use by reason of the vaults being built therein, which, with the arrangement of the doors, makes it impossible to set a desk even for an office boy further from the window than about 15 feet. With the vaults removed, there is an available space for this purpose.

(*c*). *Good service.*—There is but little to choose from between the two plans. The plan as it is provides slightly larger elevators, which is not of as much importance as their speed. The stairways are somewhat larger, but that is of very little consequence, since the stairways are at the best only for use when the elevators are shut down. It is questionable whether in the emergency toilet a urinal is of as much value as a closet, and certain that in either event there should be a wash-basin provided. The provision of wash-basins in the offices is good, and the arrangement of the toilets on the top floor is also good, and the number of fixtures probably sufficient. A better arrangement could be made, of course, were the position of the stairs different and the freight elevator abandoned, since in that case an area of 400 square feet would be saved for rental purposes. In the question of the artificial lighting of the offices very great exception can be taken. The general use of bracket outlets nearly doubles the cost of the electric wiring installation, makes it impossible to remove partitions without very considerable cost, interferes with the use of the wall for hanging wardrobes and the like, and involves the use of portable fixtures in much discomfort. A far better arrangement is to have one central chandelier with three or four pendants, one in each corner of the room, leaving the side walls free to be shifted wherever the tenant's requirements dictate. The arrangement of the stairs in the plan suggested is such as to serve all necessary purposes, at the same time removing them from interference with space that would be valuable for renting. Should one tenant require 9,000 or more square feet it would be possible to maintain circulation under all circumstances past that floor without interfering with the tenants of that floor.

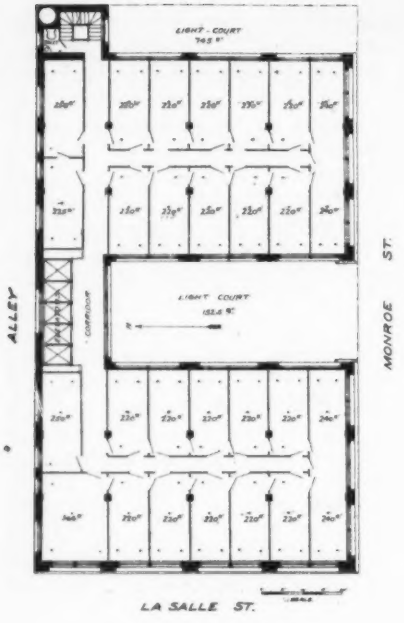
(*d*). *The maximum rentable area consistent with true economy.*—By reference to the schedule it will be seen that in order to obtain an increased rentable area expenditures to the amount of $25,000 are incurred, but that it is a wise economy so to do. This further illustrates the principle that an office building differs radically from any other building in its limitations and requirements, and as a consequence the principles which ordinarily govern the planning of buildings do not apply unchanged to the office building. In the plan as it is if all of the partitions in one floor should be removed so as to dedicate this entire floor to the use of one tenant it would be found that one corner of it would be divorced from all of the rest by reason of the position of the stairway and machinery shafts, while the central portion would be dark. In the plan as it should be the access between the two parts would be either through the vestibule in the front of the elevator, or else across a bridge thrown across the court. This at first would seem to be a disadvantage, but in every concern requiring for the prosecution of its business so large an area as 9,000 square feet the proportion of the space used by the public is ordinarily not to exceed 50 per cent of the total needed, so that instead of having the entire area on one floor, two floors would be occupied, one above the other; one floor being for the executive officers and the public, and the other for the clerks' and this would involve no particular disadvantage, but rather the reverse. If we should go beyond the 20 feet limitation in the plan as it is, extending the length of the offices along Monroe street, so as to gain 500 additional square feet, and credit that at one-half value, it will be seen that the rentable area is not yet all that it might be,

SCHEDULE OF DIFFERENCES.

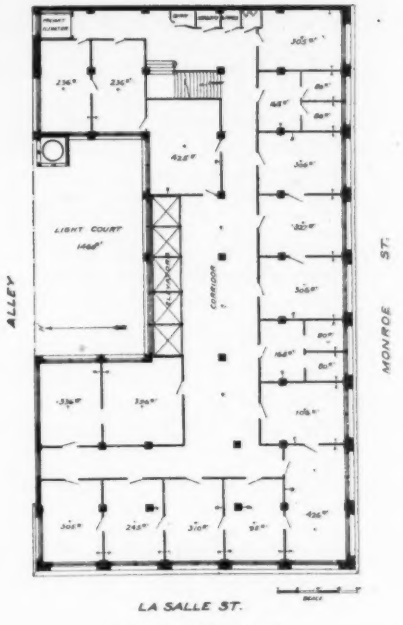
Dimension.	As it is.	As it should be.	Credit.	Debit.
Number of columns	52	42	$2,100	
Span of girders	17 ft. 0 in.	20 ft. 0 in.		
Span of beams	16 ft. 0 in.	20 ft. 0 in.		
External windows, per floor	44	52	4,800	
Elevators	6	5		$3,000
Perimeter of walls	500	562	12,400	
Angles	8	10	800	
Height (approximate)	165 ft. 0 in.	165 ft. 0 in.		
Court area	1,460 sq. ft.	2,270 sq. ft.		
Halls, walls and stairs	4,490 "	2,639 "		12,000
Net rentable area	5,410 "	6,451 "		234,225
Area of building	9,900 "	9,090 "		
Area of lot	11,360 "	11,360 "		
Cube of building	1,633,500 cu. ft.	1,499,800 cu. ft.		50,110
Percentage of light rentable space	100	100		
Total			$20,100	$299,335
				20,100
				$279,235
Additional available area, ½ value				57,600
Net debit				$221,635

while the loss, by reason thereof, remains still at a considerable figure. We have based the capitalized losses at $1.50 per square foot, capitalized at 8 per cent, and it will be seen that this represents a considerable fraction of the cost of such a building. Should it be desired, the second floor could be carried over underneath the light courts in each case, thus adding 25 per cent to the rentable area on one floor, and that one of the most valuable in the building; but no credit has been claimed on account of this. In the plan suggested, it will be noted that the area of the width of the corridor in front of the elevators is made somewhat less than that of the plan as executed, but when it is considered that this is entirely free from columns, and that one-half of the tenants come from one side and the other one-half from the other, it will be found to be more than sufficient. In the same way the side corridors are made narrower simply because the width as given is enough, and nothing is gained by making them wider, while there is a decided loss due to the necessity for carrying the paving of the corridor over that much greater area. In the plan as it is, all of the corridor partitions are shown with sashes in them, which would be rendered unnecessary in the plan suggested, because with glass in each of the entrance doors, and with glass transoms over them, the corridors would be perfectly lit, while that portion requiring the most light, in front of the elevators, receives light from both the north and south.

(*e*). *Ease of rearrangement to suit tenants.*—This has already been referred to in connection with the position of the bracket lights. In the executed plan, it will be seen that the position of the columns very much interferes with the subdivision of the offices and of the arrangement of the hall space, since in the La Salle street front two columns occur in the centre of an office and are only saved from being a great nuisance by reason of the fact that fire-proof vaults are put in to fill in the space behind them. It will also be seen that the arrangement of the columns is very disorderly, and that columns occur at odd places in the halls, all of these interfering with the free use of the floor space, and making it exceptionally difficult to treat it architecturally and satisfactorily in the event of one tenant requiring any large area. The building in of fire-proof vaults in the offices interferes with any re-arrangement, making the same



ALTERNATIVE PLAN.



PLAN AS CARRIED OUT.

perfectly impossible without going to a very considerable expense, which could not be borne unless the offices were taken for a long term of years. In the plan as proposed, these difficulties are of course entirely obviated, a symmetrical treatment of every portion of the office is possible, partitions can be readily removed and at a very slight expense, and the arrangement is such that even the hall paving could be utilized to advantage. The size of unit in the plan proposed is somewhat larger than is customary, but the location of the building is such as to indicate a class of tenants who would willingly take the larger sized offices. With the lights on the ceiling it is, of course, a simple matter to at any time remove a partition, giving the tenant as much office space as he desires in multiples of 220 square feet.

(*f*). *Minimum of cost consistent with true economy.*—In the plan as it is, recognition has been made of the fact that a moderate spacing of columns is at all times desirable, and as a consequence there has been a credit allowed for the saving in the depth of girders and floor beams by reason thereof. The total saving in the cost of the framing is not, however, a very large item, the saving in the number of columns in the plan as it should be, being offsetted by the necessity for increasing their section somewhat on account of the need to support a larger area. In the case of the floor framing, the saving which would naturally be due to the decreased thickness of the floors is offset by the fact that a greater floor area is provided than is necessary for the service of the building, and that the unsymmetrical spacing of the columns requires numerous girders in odd places, preventing any advantage being taken of the reduction in height which could otherwise be effected.

The advantages of office building planning is finally shown in the great saving in the cube effected thereby without loss of rentable space, which lesson is further enforced by the totals given in the schedule.

CORRESPONDENCE.

To the Editor of THE ARCHITECTURAL RECORD:

In a recent copy of THE ARCHITECTURAL RECORD, the writer of a paper, entitled "Wasted Opportunities," has distinguished us by selecting, to his mind, as a satisfactory example of such, a building of which we are the architects.

It is conceded by him that the peculiar conditions which have resulted in the present ground plan "as it is," are unknown to him. If he chances to be a member of the profession, it is charitable to presume that the special environments of the building also are unknown to him, for otherwise we think it impossible that such suggestions as his plan, "as it should be," could have been made. Without giving the least consideration to these circumstances, the importance of which necessarily has determined the general development of our ground plan, your writer submits one of his own, boldly asserting this to be the plan "as it should be."

Your publication, in which the paper referred to appears, is not a professional one, reaching only members of the profession or those who are interested therein, but is a periodical which is sold on all news stands and bought by the public at large, and therefore reaches the eye of many not trained in architecture.

The paper itself deals with concise facts, that of a criticism and alleged improvement of a ground plan of a given building already erected from the alleged faulty plans. It necessarily must create the impression, whether intentional or not, especially among those of your readers who have no technical training, that a faulty, wasteful, ill-lighted and poorly-ventilated building has been planned, and thereby you appear to "have it in" not only for the architects, but also for the owners as well, who expect, of course, to receive the exact counterpart of what the paper intends to make the building appear.

It is for the reason that we consider it our duty to the latter to see whether your "anonymous" critic has not overstepped permissible bounds. The propriety of his action may justly be questioned, even if his plan "as it should be" could claim to be all what the writer asserts for it; but how will it be viewed when the positive absurdities and impossibilities thereof must be obvious to the most casual observer, who in any way is conversant with the ground plan and principal requirements of an office building?

It is of course unknown to your writer, as he admits voluntarily and as we stated before, that the facts before us in this case were:

"To provide one large office on the first floor making use of the entire area of the lot, the office space to be unbroken by incumbrances, such as elevator shafts, stairs to minimize the number of supporting columns, the entire space at the same time well lighted directly by skylights or otherwise, and also well ventilated by outside windows. Also to provide two similar floors on the second and third stories for a special purpose, also unbroken, and so extended as the requirements for light would permit."

It will be seen at once that the location of the elevators and stairs in the plan "as it should be" is in this case an impossibility, as it would divide each of the lower floors, and especially the ground floor in practically disconnected sections. This, however, is a matter of secondary importance compared to the following:

The building as it stands is flanked on the westerly side by a structure ten stories high; on the easterly side by a six-story building, but of course a few years hence may see this changed to one also thirteen or more stories high. Assuming this to be the case, we would have in the plan "as it should be" on the easterly and westerly side "shafts" ("they could not be called light courts") about 6 feet wide and from 120 to 200 feet high. Towards these shafts face ninety-six office rooms, deriving light from no other source. It goes without saying that almost total darkness would permanently prevail in all of these, except probably a few upper stories.

The main and intermediate corridors are not better off, also given up to perpetual semi-darkness, the only source of direct light being one stair hall window in a corner which admits light, where in this plan it is probably least needed.

Instead of overlooking from the office windows the life of a bustling city or a beautiful harbor, as is the case in our plan, the offices would all, except on the street front, face dead walls of narrow dark shafts, sufficient in our opinion to make those rooms forbidding and repulsive to an ascetic, not to mention to a New York business man, who is to be the prospective tenant.

As fanciful only can be looked upon the curious proposition to build a narrow extension on the southeast corner, which would be about

7x18 feet clear, and require three free standing walls, about 200 feet high, 2 feet wide at the bottom, according to law, thereby, in consequence, extending the narrow 6-foot wide shaft for further 18 feet in length.

We have yet to learn, Mr. Editor, that this can be called an economical and commendable construction, outside of the fact that the extension thus secured is not separately accessible, and evidently was only planned to show an increase of floor space, which practically is impossible to attain.

The only direction from which permanent and abundant light for the building erected on this site can be secured, at least for a long time to come, and perhaps forever * (the United States Assay Office being the rear neighbor), is from the south; a point your writer has not understood or deliberately lost sight of, building up a dead wall to this source of light with the results shown on his plan and further explained by us herein.

No further comments are necessary, and none in regard to the calculations of alleged wasted or ill-spent costs which accompany this erudition, the same being based on conditions which, as we have shown, conflict with fundamental requirements for the building in question.

A critique, written with a prejudiced or biased mind and applied to a concrete case, appearing in a periodical widely distributed and read, undoubtedly does injury to those who are connected with its object—in this case to the architects and owners.

If it can be shown that such critique contains gross errors and injustice, it constitutes the deliberate perpetration of a wrong, which should be righted.

We therefore request, Mr. Editor, that you will publish this, our side of the case, in the next issue of THE ARCHITECTURAL RECORD, giving it the same prominent place which you have vouchsafed the paper in question.

DE LEMOS & CORDES,
Architects.

* This is entirely an assumption, and a very unstable one. In Washington, to-day, a movement is on foot to appoint a committee to inquire into the condition of the Federal Buildings in New York City. The use of so small a building as that in which the Assay Office is housed on land so valuable, is one of the matters which (if the Commission be appointed) will receive particular attention. Should the land be sold and a large office building be erected on the site, what becomes of our correspondents' position? The "only direction from which permanent and abundant light * * * can be secured," would then be cut off. All that is said about light shafts would be applicable, but with much greater force to the building "as it is."—EDITOR.

While we cannot undertake to publish the comments of the architects of every building that we criticise, we are glad of this opportunity to explain and emphasize our position for the last time. As we said in the first article of this series, we are simply illustrating general principles, and "do not wish to be considered as laying the blame for any defects on the shoulders of *any one* person."

In the letter, which we publish, the architects state the conditions of the problems which was given to them by the client, and these conditions fixed the development of the plan, and therefore afford a reason for its development in that particular way, which is a case covered by our remark above quoted. But, however, because the client is responsible, the violation of fundamental principles is not, on that account, the less actual. Clients, we know, are frequently the cause of fundamental errors in plan and design, but is it to be maintained that the errors are not errors because the client desire an irrational arrangement. Certainly the architect is not to blame. He cannot convert all the heathen it is his sad fate to deal with.

Concerning the question of light, it is a matter susceptible of easy demonstration and within the range of observation of every one that the most effective dimension of any light shaft is the northerly and southerly one. The shafts in the plan as submitted by us have their long dimension north and south, and in that way afford an outlook over "the life of a bustling city or of a beautiful harbor" as well as in the erected building. The fact of the United States Assay Office being the rear neighbor was one known to us, but it is not permanent, as the architects admit, and inasmuch as the building is likely to be inclosed by other buildings on all sides in manner similar to the way in which it is on the west, they or their clients—whoever is responsible—must face the possibility of the light from the south being excluded by a building as high as their own, in which case they are in the unenviable position of having

one-fifth of the rentable area of the building facing on a court that is only 6 feet long in a northerly and southerly direction. In the suggested plan the fact of the long court running north and south along the easterly line would be an inducement for the adjoining property-owner to place his court in the same position, in which case it would no doubt be made of a similar width. Were it made less, the benefit from it could be denied the adjoining property-owner by means of suitable screens.

As to other matters of which our correspondents speak, we must refer our readers for judgment to our original article.—EDITOR.

RAYMOND LEE.

CHAPTER XVII.

ON THE WAY TO THE OIL REGION.

"YOU are Mr. Lee?" began Balder, inspecting Raymond superciliously.

"Yes. Mr. Moyle told me...."

The City Editor interrupted. Mr. Moyle, he said grandiloquently, had spoken about Mr. Lee, had referred the possibility of giving him (Raymond) a position on the *View* to him (Balder). Furthermore, Mr. Moyle had said that Lee "had done considerable literary work."

This reputation was evidently the outcome of some pious fiction of Ralph's. When Lee assured Balder that he could not lay claim to any such qualification the City Editor elevated his eyebrows in a way that as much as questioned the use of any further conversation.

"And, of course, you know nothing of New York?" he continued.

"Nothing," replied Raymond, frankly.

"Well, young man, what could you possibly do for us?"

"Really I don't know, Mr. Balder. No doubt I have been very foolish to waste your time," said Raymond, smiling.

This frankness pleased Balder; it so completely conceded the command of the position to him.

"No," said Balder, with a trace of good nature.

"When I spoke to Mr. Moyle," continued Lee, "my hope was that there might be some tyro's work that he—you—could give me to do."

"Tell me what you have done."

Raymond's answer and one or two questions which Balder asked disclosed an outline of the Eastchester life and its impracticable enthusiasms. Balder was interested. He smiled frequently during Raymond's recital, and paused many times in the course of drawing little figures upon the blotting paper in front of him.

"Queer training that for a newspaper, Mr. Lee," he said, finally.

"I can well believe it," said Raymond, "though probably I don't see its full ludicrousness as you do."

"Undoubtedly," said Balder, "or you wouldn't be here, I assure you."

"All I can say, Mr. Balder, is that if you can give me a trial—but I suppose the further I go the more foolish I'm making myself."

"Yes," said Balder, smiling. Raymond concluded that his first attempt to secure employment had failed. He felt disappointment rising within him and would have arisen and departed had not the City Editor leaned back in his chair and commenced to scrutinize him. Suddenly he asked: "Have you anything to do this afternoon?"

Raymond had not.

"Then there's one thing I'll get you to do. You know French?"

Balder produced a volume of a French Biographical Dictionary, and Lee was soon at work concocting a short obituary notice of a second-rate French scientist long retired from the world, the death of whom had been announced that morning.

Leaving Lee at work Balder went to luncheon, for Balder fed well, indeed, professed to be somewhat of an epicure—an insinuation that he had always been used to good living, and had not during his youthful years shared the frugal fare of his mother, a washerwoman, who still enjoyed the confidence and patronage of a number of families in a certain part of Lexington avenue.

When Balder returned, the few paragraphs required were finished. Raymond handed them to him. Balder read them, frowned once or twice, but he said condescendingly when he had finished: "Yes—that will do. However...."

Fleck appeared at that moment with a card. "Show him in," said Balder. "Mr. Lee, I'll see you in a minute."

The individual whom Fleck announced entered the room impetuously, as though the last moment for his purpose had arrived. Lee's attention was at once attracted to him, and Fleck, having conducted the visitor to Balder's desk, or, more strictly speaking, having run after him to that spot, lingered to scrutinize him. The stranger was a man of middle age, tall and thin. Prominent blue veins traversed his white forehead and imparted to that feature the vitreous appearance of porcelain. His eyes were black, small and restless. All his movements were quick and nervous. His clothes, provincial in style, had a neglected look that stamped them as part of the wearer's *impedimenta*.

"You're Balder?" he asked, peremptorily, in a staccato manner, as soon as he spied that individual. As he spoke, he seized a chair, and, sitting on it, hastily drew it close to the City Editor's knees. Then he stretched a long arm across that personage's desk and began to tap on it with his bony fingers.

"I got your letter. Would have called sooner—but couldn't."

"Yes, yes," assented Balder, disconcerted somewhat by his visitor's impetuosity.

Who would have imagined that *this* was the writer of that quiet, matter-of-fact letter? thought the City Editor. Here was a man most objectionable to Gods and little people—one without reverence; and Balder was in haste to impress his visitor with the dignity of the editorial position.

He withdrew his chair, and leaned back in it.

At once, the visitor retaliated by advancing his.

"I don't know whether you want to be put right on this matter," he said. "It's nothing to me—understand that. When I read the stuff you published—when was it?—day before yesterday—couldn't help writing that letter to you."

"Very good of you, Mr...."

Balder hesitated.

"Pulling," snapped the visitor, "not at all—I'm an old newspaper man—the general damager and chief mogul of the *Welltown Weekly Eye*. The *View* 's a good paper—for

some things—in the news line I mean. In politics it's asinine. But pshaw," he continued, condescendingly, "that's nothing—who cares for editorial opinion these days. We've got to the straw in *that* doll—eh?—know why its squeak is always the same when pinched—eh?—ha! ha! But that isn't the question. About this new oil field—as I told you in my letter—you are tee-totally wrong. The Jim Crow well was drilled into the sand the night before we left—and she's a gusher! She's doing...."

Mr. Pulling didn't give articulate expression to the quantity of oil that particular well was producing. He seized a piece of paper, wrote some figures on it, and with an air of triumph handed it to Balder.

He threw himself back in his chair to watch the effect produced by his statistics.

Evidently the figures did move the City Editor. He asked:

"How do you know?"

"Me!" cried Pulling in surprise. "Because," he added triumphantly, pushing his long forefinger closer to Balder's nose as he uttered each word, "I—was—there—when she was drilled in. She belongs to my friend Lawler—who's now in New York with me. He's—but never mind that. You newspapers are all on the wrong track. When we get back to Catch-On—down 'll go the boarding from the Jim Crow—then the world will see what the new Catch-On Field amounts to."

"But," said Balder, with hesitation, "our correspondent...."

"Your correspondent!" interrupted Pulling, derisively. "Who is he, anyhow?"

"Oh—well—now." Balder smiled.

"Yes—I know—Power behind the throne and so forth. You can't give it away. Well, don't. But I tell you the chump doesn't know what he is talking about."

Balder remained for a moment silent, viewing the piece of paper on which were Pulling's figures.

"Have you given this to any other paper?" he asked.

"No, sir," cried Pulling, angrily. "I'm not hawking my information about. I'm damned if I know why I wrote to

you, anyhow. We are ready now to give out the real facts about the well—and I thought I'd let the *View* have first whack."

"Yes, yes," said Balder in a conciliatory tone. "It is very good of you, I am sure. Now, Mr. Pulling, *could* you give us the exact figures of each day's production of the well since it first began to flow?"

"Yes, sir," cried Pulling with decision. "I haven't the figures with me, but send one of your young men along to my hotel and I'll give him them and perhaps some other information *I* know you'd like to have for your paper. But here," he cried, jumping to his feet, "I must hurry. We leave town to-night. Who are you going to send with me?"

Balder hesitated a moment; then he called to Raymond, and in doing so played his part in Lee's fate.

"Mr. Lee," he said, "I want you to accompany Mr. Pulling here, who will give you some figures and other information. Please read over to Mr. Pulling whatever you may take down. Let him see that it is correct."

"Leave him to me. Bye," cried Pulling, who, without another word, hurried out to the elevator, followed by Lee, and—the astonished gaze of Fleck.

"By ginger!" exclaimed the latter, "there's a rank one for you."

Having gained the street, Lee found that, far from accompanying, he was engaged in a stiff pursuit of Pulling.

Beyond a preliminary "Come on," that erratic individual paid no heed to his companion. With the upper part of his body thrown forward, Pulling precipitated himself through the crowd at a gait a little below a run. The most Raymond could do was to follow him at some distance, and he was glad to find that the stern chase ended in a few hundred yards, at the Astor House.

In the entrance to that ancient hostelry Pulling waited for Lee to come up to him.

"Ha! ha! young man," he cried, smiling, pleased with his own performance, "*You* haven't learned how to hustle through a crowd. I tell you, the greatest curse the human race has to contend with is their idea of space. As a fact, distance doesn't really exist—is a

mental disease—infirmity of the mind—but we are getting over it. Our forefathers said Philadelphia was twenty-four hours from New York, we say it is two hours. Nothing of the kind. It's right here," he tapped his forehead, "there is no space. Would be none if the mind wasn't still an imperfect machine. Come up stairs; I want you to see Lawler. We put up here—because it's handy for business down town."

As they ascended to Lawler's apartment, Pulling explained that Lawler was owner of the Jim Crow well, also of much land in the vicinity of it. Indeed, was a very wealthy man, one of the wealthiest in the oil region and a particular friend of his (Pulling's).

"He owns the *Weekly Eye*," Pulling added, no doubt believing that the fact would have "shop" interest for Raymond.

But Lawler, they found, was not in his rooms, so Pulling opened a door adjoining and invited Raymond to enter *there*.

"This is my room," he explained. "Sit down, Mr. ——, what's your name?—Lee—and make yourself at home as I do."

Whereupon, he divested himself of his coat and made himself easy in an arm-chair with his feet cocked up on the wash-stand.

"No style for me, you see. You're English, eh?" he asked, abruptly. "Umph! The trouble with you English is, no matter how far you go, you never get more than one leg out of England. How long have you been on this side?"

"Not quite twenty-four hours."

"Joke?"

"No, indeed, I arrived only yesterday."

"How is it then you are on the *View?*"

"I'm not on the *View*."

Pulling's black eyes blinked rapidly.

"That is so," Raymond assured him.

"Come off, young fellow. Didn't I find you over there? Didn't what'sname send you along with me for this news?"

"Yes, but that was only by chance. I was trying to get something to do there. On the steamer we—that is, my friend, Mr. Winter. . . ."

"Winter, what Winter?" demanded Pulling, quickly. "Abraham Winter, of Pittsburgh?"

"No, his son!"

"You know him? You do? Lord! how small the world is! Do you know the old man owns some of the best land in the Catch-On Field? We've been trying to buy him out. He won't sell. He's drilling now right across from the Jim Crow. And you know his son, eh? Well! He's got some interest they say in the Catch-On lands. It belonged to the mother. Where is he?"

"He returned to the States with me. He is in New York at present, as a matter of fact, merely waiting to see whether I get a position on the *View*."

Pulling was busy with his thoughts for a minute, then he asked:

"You're not stuck on the *View*, are you? I have an idea."

"Stuck on the *View*, what is that?" asked Lee.

Pulling laughed.

"I see you're not on to the great American language. What I'm getting at is this: Suppose Lawler will give you a place on the *Weekly Eye*—small pay, of course, hard work and all the other perquisites of the poor—will you take it?"

"I'll take anything I can get."

"So bad as that, eh? Well, Lawler can't have gone far. When he comes back I'll have a talk with him. You could start with us to-night. Eh? Good."

One can never tell by the door through which one enters what one is to find inside a room, and often in after years Raymond found himself wandering along those shadowy by-paths which at almost every step strike off from the actual road of our lives, wondering whither would he have drifted had he missed that amusing, accidental encounter with Pulling. But, after all, in life there are really no possibilities. What is not could never have been, and speculations as to what might have occurred are excursions into the imaginary as truely as the wildest play of the fancy.

The result of the interview with Lawler was, that before midnight Lee, in company with Pulling, Lawler and also Ralph (for the latter found he could reach his destination by

the route the others were taking), was speeding comfortably in a Pullman car into Pennsylvania. Regarding the scenes or the fortunes he was hurrying to, he hadn't the faintest notion. But though there was nothing to be seen there was prospect before him. To the young that is always promise. The sense of motion begat a mild excitement, and Raymond's disposition was one that, like certain plants, turned quickly to the sun. Pulling's eccentric loquacity and Lawler's jollity—for Lawler was a fat, good-natured, coarse-grained creature—drew even Ralph out of his dark mood. Moreover, the news of the sudden increase in his father's wealth, in which apparently he had a share, was not entirely without a pleasant savor, for at heart Ralph did not undervalue the fleshpots which the ordinary world ardently and vigorously hankers after. He really objected only to the crude details of the cookery. He desired his portion to be as large as possible—his fastidiousness was limited to wanting the service on fine china.

CHAPTER XVIII.

IN THE OIL REGION.

THE Oil Region of Pennsylvania is one of those spots, which mankind discover occasionally, wherein Luck, like an Eastern Potentate on his travels, pitches his tent for a time to make sport with the fortunes of men. These regions, usually—you will notice—rude and inaccessible, become enchanted for a period; and, as in fairy tales, luckless wanderers discover unexpectedly in mountain wilds and forest depths, trap-doors leading to subterranean caves of wealth.

The Pennsylvania oil fields occupy part of the northwestern corner of the State. It is a rough, broken, stony region of sharp hills and forest and wide, shallow, tortuous creeks that fret over pebbly bottoms. Until one, Drake, drilled the first oil well there and demonstrated that petroleum could be obtained by the artesian method like

water, the region was an obscure by-place, where a sparse and scattered population won a hard existence by lumbering and farming, amid blackened tree stumps on land in which only a lithologist could have a living interest.

Beneath the surface, however, the gnomes of old Nature had been busy since the world was young, storing up fabulous wealth, and Drake's discovery was the happy touch that disclosed it. It made the poverty-stricken region an El Dorado. The Northmen of our times—the rovers of modern days—the rough adventurous spirits whom civilization doesn't quite civilize, ready to push out in the frailest crafts for new lands which offer great prizes for hard living, poured at once in multitudes into the hemlock forests and scattered along the steep wooded creek sides, to seek the new wealth hidden there.

And the transformation that was wrought!

Rough timber towns of barn-like hostelries and crude shanties arose. Sleepy villages shook themselves from their slumbers to look upon strange scenes until they too caught the fever that was in the air. Motley, eager crowds filled the primitive streets, and heavy wagons, as expensive to maintain as an emperor's carriage, ploughed through the mud roads. At night, Jezebel, freed from restrictions—and an excess of clothing—danced and made merry in the light of smoky oil lamps.

The sound of hammers on the derricks and cries of teamsters broke the silence of the encircling forest. There, too, in many places, hissing flames of gas, like fountains of fire, rose from the earth, casting at night through the trees a lurid glare, which the deer stole from their haunts to wonder at.

Oil Creek, Petroleum Centre, Pit Hole and a score of other places, now ruins or mere names of towns that once existed, record where the oil fever for a time infected multitudes. Money was made and lost as in a gaming house, and the prizes were large enough to dazzle and tempt millionaires. To strike oil might mean an income of one thousand or five thousand dollars a day. But Fortune here was capricious beyond her wont. No calculation could positively secure, no effort retain her favor. Frequently

she gave abundantly where she promised least and disappointed most completely where expectation had the strongest warrant. The prize drawn in the morning was before evening the temptation which led to the loss of everything. The safest course in many cases was the one which seemed the least reasonable to follow. Mirage was everywhere. As a consequence, few kept the riches they gained. Conditions fluctuated with marvelous rapidity. The seat of production shifted repeatedly. Men had scarcely ceased to marvel at the growth of towns which had arisen as by the encampment of an army when the process of desertion had already commenced.

It was for this region that Lee set out with his new friends. Late on the day after their departure from New York, Lee and Winter bade one another good-bye at the railway junction, Ophir, which, despite its opulent appellation, was a town so dismal and muddy-looking that it suggested an abode where the unhappy were sequestered.

"What a genius we Americans have for the hideous," exclaimed Ralph, as he surveyed the scene from the platform. "I hope my train won't be late. How much further did Lawler say you have to go?"

"About sixty miles, I think."

"Well, Ray, there is one good thing about this new enterprise of yours, you won't be far from Pittsburg—only a few hours. And though I hate to leave you in the company you are in, I'm better pleased than if you were in New York. Now, mind, I expect you to come on to see me the very first opportunity you get. You will, old man, won't you? Somehow, Ray, it seems harder for me than you. And Marian...."

Ralph stopped short. For a moment he and Raymond stood looking into one another's faces.

"All aboard!"

"There goes your train, Ray. God bless you—both of you. You must go back to her. I shall write to Eastchester."

The last words were shouted after Raymond, who, parting with a hard shake of the hand, boarded the moving train.

From the car platform, Raymond watched his friend until a curve in the line shut him from view.

The dusk was fading into night when Lee arrived at the end of his railroad journey. Welltown was one of the older oil towns which had acquired some degree of fixity as an emporium and headquarters for a score of smaller places scattered amid the several oil fields that dotted the country within fifty miles around it. At one time, in the earlier days of the oil excitement, it was the centre of extensive and prolific operations, to which the hundreds of abandoned or almost exhausted wells in the streets of the town itself and in the forest which surrounded the town and crept into its streets, bore witness. Wooded hills encircled Welltown. On one side they rose precipitously like a wall behind the buildings, so that from the streets one half of the sky was cut off from sight and replaced by a towering edge of the hemlock forest. The greater number of its buildings were of frame—crude, unkempt, weather-stained structures even on Main street, the chief thoroughfare, through which the railroad ran. The stores were on this street —Quigg's, the grocer's, where amid a disorderly assortment of canned goods the United States maintained the postal service; M'Koon's, the druggist's, where so many things foreign to the pharmacopœia, were dispensed; Jacob's "New York Beehive," where the proprietor gathered the modern honey of Jerusalem, from dry goods; a greasy-looking barber's store; an oil-well supply store; and others. In all, the dull, yellow lights of oil lamps were blinking when Raymond caught his first glimpse of the town from the station. The twilight aspect of the place was indescribably forlorn. The quietness of the streets was saddening, perhaps because of the contrast it offered to the sensation of motion and the steady hum of the traveling cars during the past day. There were many people about, but it was the evening hour for lounging and they were congregated in little knots and seated in and about the stores.

As the train pulled out of the town and Raymond watched the red rear lights diminish and pass from sight amid the forest, he felt as though a friend had forsaken him in a strange place, and he was now cut off from the world.

The only pleasant sight was the long flame of natural gas which hissed from a tall pole-like pipe in front of a square building with a large verandah upon which in white letters on a blue background was written:

UNITED STATES HOTEL, THOS. FEELER, PROP.

"Home again," cried Pulling, exhaling a long breath. "After all, there's no place like it."

Raymond wondered whether a man who could have feelings of that sort should be pitied or admired.

It had been arranged on the train, during the journey, that Pulling and Raymond were to proceed without delay to the Jim Crow well, but that Lawler, who inhabited one of the more pretentious houses in the "fashionable section" (to use the native characterization) of Welltown, was to spend the night at home and join the couple in the morning. With an indifferent "good-bye" at the station, the oil producer, who was a man of little ceremony, forsook his companions.

"Hurry up with your feed," he said to Pulling. "I'll have the buggy ready for you by eight."

"Right you are," cried Pulling, who, as he told Lee, enjoyed "being on the go."

"I went through Europe three years ago in two months," he said. "France, Germany, Italy, England, saw everything. People are so durned slow—can't turn around without sitting down to think about it. I'll send your traps up to my rooms—you can find them there when you want them—and we'll hurry over to the hotel for supper. Come on."

Raymond acquiesced. He was still moving very much in the dark and could see no reason for objecting to follow any course suggested to him. Lawler had instructed him to give "a help to Pulling, who'll show you what to do," so, without a word of dissent, Raymond allowed himself to be led. It was apparent that Pulling enjoyed an off-hand importance in playing the part of conductor and exhibiting his eccentricities, in which evidently he took pleasure. Clearly there was method in that individual's waywardness. Like other contortionists he had practiced

his tricks until he performed them naturally. His willful bizarririe was an expression of a tremendously exaggerated egotism. For notoriety he would have worn his coat inside out and maintained that it was the intention of the maker. Indeed, Raymond learned subsequently that when he returned from Europe, a trip of which he talked ceaselessly, and which, by the way, his father induced him to take to escape the consequences of a hot-headed quarrel, he never appeared on the streets without an alpenstock and a field-glass slung over his shoulders, alleging that he had become so used to these "accompaniments" in Switzerland that he felt uncomfortable without them.

Several voices hailed Pulling on the way to the hotel, for Pulling was well known. He was not only one of Welltown's notorieties, but an omnipresent individual who pushed himself with incredible celerity into everybody's acquaintance.

"Hallo, Pulling," cried one as he darted by. "Where're you off to?"

"Fishing," cried Pulling. "Catching gudgeons."

"How's the Jim Crow?" asked several

"There goes the crank," said another.

"Come on, Lee," shouted Pulling. "Mind," he said, as they entered the hotel, "we've only fifteen minutes for this performance. Don't masticate your meat—it's a false notion—all carnivorous animals bolt their food—Hello, Feeler—Any of the debris left? This way, Lee. In here."

The dining-room, a low, dimly-lit apartment, traversed by four long tables covered with obviously maculate red cloths and many little soiled dishes, was almost deserted, for in Welltown eating was a severe business, discharged with the haste of the Passover. Having served the usual guests of the house the waitresses were enjoying their own meal when the two late comers entered.

"Hurry up, Lilly," cried Pulling. "My fairy Lillian—white rose with the black thorns—we've only got ten minutes. I've brought a blasted Britisher from Hingland, you know, to make love to you—but not to-night, Lilly—we've something else on at present. Sit down, Lee."

A dark girl came forward tittering.

"Never mind the menu, Lilly," said Pulling, seating himself and at the same time clearing a space before him on the table. "The evening formula, Lee, in this *maysong* is invariable—chops, steaks, corn-beef hash, eggs, tea, coffee. As the Irish lady said: 'if their tay was as strong as their butter it would be an illigant repast.' We'll leave the choice to you, Lilly. Bring us the best you've got—omitting the hash.

A sense of chill despondency deepened upon Lee. At that moment he would have retreated from his new position had retreat been possible.

The depression, however, which he suffered was soon dissipated. It vanished almost at the very commencement of their long night ride. The chilling crudeness of the town passed as by fairy transformation into the moonlit stillness of the forest. The road they traveled on—lined on both sides by the forest like an army on parade—wound over hills, dove abruptly into valley depths or skirted along high wooded banks at the foot of which were streams that sparkled in the moonlight and reflected the dark shadows of the trees that bordered them. The cold night air was laden with the moist odors of the spring. The peace that reigned was profound. The earth and all upon it slumbered under the spell of a soft enchantment like a maiden lost in dreams, and above, in the dark purple sky, the stars appeared to be yellow globes of light that were drifting slowly upon upper currents away to the horizon.

Even Pulling's loquacity was hushed, not because any of the poetic light was in his eyes, but, to tell the truth, because being very shortsighted with all things, including poetry, he was obliged to pay strained attention to the horses.

From whatever cause, Raymond was glad of the silence. He lay back in the buggy, and with eyes half closed passed, not precisely into dreamland, but into that vague borderland just beyond the present, where memories and hopes blended with the scenes he was traveling through. Arising perhaps from the witchery of the night, a feeling of vague anticipation filled him. The barriers that had narrowed his life for years seemed to have fallen away, and

far from being bound that night for a prosy destination, he was stepping forth hopefully into a measureless region traversed by happy paths. Despite himself, he felt a sensation of keen expectancy, a stir of strange exultation. The actual facts of his condition were for the moment thrust to the background. Actual facts, indeed! In such a night as that the very substance of facts was dissolved to gossamer and nothing remained of them but the merest outlines with which the magic of the moonlight played tricks. More than once, when the vehicle descended into the dark hollows, the trees appeared to lift up their giant arms and press in upon the road in front of the travelers as though to frighten the intruders from the gloomy recesses; and afterwards, when the summits were attained and wide views of the country as far as the horizon were disclosed for a moment, the forest was like a retreating army covering the hills.

Pulling's white face paled in the moonlight. Bent forward, with a look of intense preoccupation on his face, his dark eyes peering through heavy iron spectacles, he appeared to Raymond to be some supernatural being who was carrying him away.

After leaving Welltown the first word uttered by Pulling, save to the horses, was in the shade of one of the woody hollows.

"See that hut there?" he said, pointing to the trees with his whip.

Some fifty paces from the road in the phosphorescent glow which the moonlight diffused through the forest aisles Raymond saw a deserted hut.

"That," continued Pulling, "is where Hen Sprint was murdered."

Raymond shuddered.

A cold gust of air seemed to pass from the trees.

"Whoa there. We'll take this next hill easy—whoa Bet." Pulling leaned back in his seat.

"If it hadn't been for Sprint's death we wouldn't be here to-night. It was him put me onto the Catch-On Field. How?"

Pulling spoke in a dreamy tone. His eyes were fixed as though staring through the smoking breath of the horses at something before him.

"Sprint was a bark-peeler—tanning, you know—lived alone in that hut. His brother, Pete, and his wife lived on the other side of the road—three-quarters of a mile back. They were in a kind of partnership—whacked up in the results by some sort er rule of three, for Hen was head of the firm. Hard worker Hen—he was like a woodpecker—spent all his time on the trees—or sleeping. He made a trip to Welltown once or twice a year—never more—to buy clothes. The rest of his time he was in the woods. All the money he made he put into land hereabouts, and when he died he owned, perhaps, a thousand acres. His last purchase was the very land Lawler owns, the Jim Crow land. Queer! The last time I saw him he said, 'I'll be rich yet, and buy out the lot of you. Hen Sprint knows a thing or two, you wait.' About a month after, he'd secured the Jim Crow property. No one thought anything of it. It was a large deal for Sprint—but we knew the old 'possum was making money. I didn't see him again—or even so much as think of him—until we were all startled by the news that he had been found dead in his cabin. Some one had broken his head in while he slept—brutal thing—ghastly. It was Pete that carried he news to us—came running into Welltown, his wife bringing up the rear, crying, in hysterics. The whole town turned out into the woods, and by and by there was an inquest. But not a trace of the murderer. I undertook to work up the case—for the *Weekly Eye*—but there was no more evidence against any one than if Hen had died of heart disease. Lots of us suspected that it was Pete's work, but suspicion, like a squirrel, takes to the nearest tree. Good? Eh? The only thing against Pete was proximity. But Pete showed clean hands. Hen was seen drawing water at eight o'clock—Pete was at home all that night after seven. Nobody liked Pete, but you see we couldn't do anything to him, even on principle, no matter what we suspected. Of course you might as well try to get oil with a spade as find the truth of a case like that by court methods. Damn nonsense poking among the living for clues that run this way under one fellow's nose and right contrary under another's. The proper thing to do," exclaimed Pulling, raising his voice,

"*was to examine the dead man*, but somehow I couldn't get 'em to do it."

Raymond smiled at this curious method of jurisprudence, but he was too much interested in the story to interrupt Pulling by any word that would produce an argument.

"I told Lawler I could get to the bottom of the case," continued Pulling, "but, pshaw, Lawler was as big an ass as the rest of 'em. All he did was as you do with babies—smile. 'Well, go ahead, Pulling,' he said; but he wouldn't do what I wanted him to do, which was suspend the inquest until I could have a chat with Hen."

"What! the murdered man!" exclaimed Raymond.

"Of course," replied Pulling, as though the matter was perfectly obvious, "but the damndest part of it all was I could not get hold of Hen."

This obstinate backwardness of the dead man must have given Pulling no little annoyance at the time, for he still showed vexation in his voice.

"Do you know," he continued, "night after night, for at least six weeks, I did my best to meet Hen, did everything I could, but couldn't get him? No, sir—I—could—not—get—him."

"Surprising," said Raymond, struggling to suppress a smile.

"Surprising! I should say so. Never was so disappointed in my life before or since. Well—I'd about given Hen up, when one evening as I was having a talk with Henry Clay and Charles Wesley...."

"Whom do you say?" cried Raymond.

"Clay and Wesley," repeated Pulling in so natural a tone that Lee concluded the best thing he could do was to listen and say nothing.

"Charles Wesley, you know, was born in the same town in England as my great grandfather—they knew one another well—I suppose that's why the old preacher has always taken so great an interest in me. He was sitting there in my room, on one side of the stove—Clay was on the other—it was winter time, one of those clear, cold, cracking nights—and the old man—I remember it well—had just spread his soft, white, silvery hands out so, to gather the

heat and was saying with a sad shake of the head—he has the sweetest voice you ever heard: 'Ah, Mr. Pulling, I should have ordered things differently, I think, when I was with you all, could I have seen as I see now what my ideas and efforts would lead others to. I am greatly to blame for my blindness. I assure you I had no intention of cheapening the Almighty.' Clay said something, I've forgotten exactly what, about the impossibility of foretelling the ultimate effect of any idea or practice, and I was on the point of speaking to cheer up the old man when who should open the door and walk in amongst us but Hen Sprint. 'You're the very man I've been looking for' I cried. 'I know it,' he says, 'but I couldn't get away.' I introduced him to the others and asked him to make himself at home, but he declined sadly. 'No, Mr. Pulling,' he said, in a very genteel way for Hen—clearly his recent experience had improved him—'It is very good of you, but I can't stay. If these gentlemen will excuse me, though, I will impart to you what I came to tell you and then be off.' 'Go ahead,' I said, 'I knew it would come to this. You are going to tell me about Pete.' 'That is so,' he said. 'It was my brother Pete who removed me hither.' 'Ah!' I cried, jumping up. 'The fools. I was right. Never mind,' I said, 'leave him to me, he shall hang for it—go to hell with a tight collar.' 'No, no,' he said, gently pushing me back into my seat, 'not that. Much obliged to you, but it isn't necessary, and means nothing—nothing—nothing now. All that I want is that he shall not reap any benefit from the oil. It was that that tempted him.'

"'Most exemplary,' says Mr. Wesley, nodding approval. 'Ho, ho,' I says. 'I see; just what I expected.' 'You know,' he continued, 'about the'—he struggled for a moment as though his mind was vague—'four months ago I purchased two hundred acres in tract 56, just off the Tianogo road. Good land, as rich as any in the Region. I had my eyes on it for years because I was sure there was oil there. The rod indicated an immense supply.'

"Clay and Wesley turned with a look of inquiry to me. They didn't know anything about the divination rod and how some can use it to discover what is hidden beneath

the surface, so I had to explain matters to them. Mr. Wesley didn't like the idea.

"'Rather dangerous practice, it seems to me,' he said. 'Doesn't it savor a little of sorcery?'

"'I never regarded it in that light,' said Sprint. 'However,' he continued, 'long ago, when I became convinced there was oil on the land, I determined to buy, bit by bit, every acre I could get hold of. It was only good for lumbering everybody thought, and I got the two hundred acres at an average of six dollars an acre. Ah! when the deed for the last acre of that land was in my possession how tickled I was. I began to feel big, and the result of that feeling you know is speech. I said to Pete, 'I'm a millionaire—can buy up all the durned crowd around here—lock, stock and barrel.' Then I up and told him my secret. One of the first effects of wealth is to make a man try to buy things cheap, and as I wanted a little generosity at a low price I said, 'Pete, I will make over to you all the lumber land, and by and by, if you continue straight, I'll fix you with some ready cash, so that you and Mary shall never want.' 'And what are *you* going to do?' asked Pete, with what I see now was a queer shine about his eyes. 'Merely be rich, Pete, for a time,' I said. 'By and by I may do something else—can't tell just now.' 'I wouldn't change,' he said, with a little sneer that has grown plainer since. 'You can't beat the first plan. You're sure, of course, there's oil there?' he asked. When I said 'sure' he put his hands in his pockets and went away thoughtful like towards his cabin. The next time I spoke to him of my plans was'—again he paused—'some days ago. I shall run into Welltown in the morning, Pete,' I said, 'to see what arrangements I can make to begin drilling.' 'So you are going to begin?' he said, with queer indifference. 'Good luck to you.' 'I did make that trip,' continued Hen, 'but it was in this shape.'

"'Now, Mr. Pulling,' he said, changing his tone a little, 'Pete hopes to get that oil, but he mustn't. That and that only is to be his punishment. Can I trust to you?'

"'Leave the matter to me,' I said, 'I promise you I'll see to it. Only don't hide yourself from me as you have.

You are not in the woods now,' I added, for we were all getting a trifle sombre. He smiled and said:

"'No, I'll see you again, soon.'

"With that he insisted upon leaving.

"I needn't tell you I started at once for Lawler. When I told him what I'd heard, what do you think the damned ass said to me? He said, 'Pulling, either you've got the D. T.'s badly, or you ought to be put in safe keeping somewhere. Drink or your brains are too much for you.' "What do you think of that?"

"Disgraceful," said Raymond.

"Oh, I could have given it to him. But the man had done me too many favors for that, and, Mr. Lee, I'm one of those that don't forget."

Raymond assured him he was sure of it.

"All I said was this: 'Before you commit yourself too far will you let me bring Pete up here for five minutes?'

"'For what,' he asked.

"I couldn't help it. 'To prove that you are too big a fool to be worth kicking.'

"'I'm not anxious for any such demonstration, Pulling,' he said, smiling 'Why force it on me?'

"'Because you've doubted everything I've told you about this murder. Either you are wrong or I. Why not settle the question intelligently?'

"'There's nothing to settle, Pulling,' he said, 'except your unhealthy imagination. It's leading you the devil knows where!'

"There was no use arguing. I said, 'Will you *oblige* me in this one matter. If you don't admit I'm right before I'm through I'll never contradict you again on anything.' 'Lord, Pulling,' he cried, 'that would be worth anything!' Without another word I left him.

"Was I hot! Ge-whittiker! Oh, no! I made up my mind to drag Pete Sprint to him by the hair of the head if he wouldn't come any other way.

"Then and there I got a buggy and set out for the woods.

"I found Pete in bed. I got him up and before he was half awake had him on the way back again to Welltown.

"'What does Mr. Lawler want me for,' he asked.

"'He's going to begin drilling,' I said, 'over in Tianoga to-morrow just outside tract 56, and something has happened to Wilson'—that was one of Lawler's old standbys—'and he wants you to help him.' I knew that would fetch him.

"In one-two order I can tell you I had Peet before Lawler.

"I whispered to Lawler, who was still in a smilingly contumelious frame of mind: 'Let me handle him.'

"'First of all, Pete,' says I, turning the key in the door and pocketing it, 'you understand Mr. Lawler wishes everything that passes in this room during the next few minutes to be strictly secret. You will see why as we go along.'

"'Oh, yes, certainly,' said Pete, a little dubiously.

"'If anything leaks out it will be from you, mind, and the cost of any damages will be paid by Peter Sprint, Esq.'

"The fellow eyed me.

"'Do you know Pete,' I said, looking him straight in the face, 'Hen has given you away? We have his post-mortem statement.'

"He did'nt know what post-mortem meant.

"The cur bounded out of his chair as white, sir, as a sheet.

"'Sit down,' I said. 'All the circumstances of his murder are known to us.'

"'It's a lie,' he roared. 'Mr. Lawler, let me out!'

"Lawler, I can tell you, was surprised.

"'You're forgetting,' I said, 'what I told you a minute ago about secrecy and the consequences of any leakage. If you want to go you can,' I said, putting the key of the door on the table, 'but I think you'd better stay a little with us here, because it's safer for you. It happens that the Chief of Police has just dropped in for a few moments downstairs. Sit down.' Pete sat down. 'Your brother,' I went on, 'has told me everything.'

"'You are trying to trap me,' he cried, 'but you can't. Let me go.'

"'No trap, Pete, unless you mean that your brother's post-mortem statement is a trap. So it is—just big enough to swing you about eight feet in the clear. He told you there was oil on his little purchase on tract 56. He was

going to be rich, eh? and you felt badly about it, Pete. You think you stopped his power of speech on a certain night, but you didn't. He has given you away to me, my fine fellow, but in a very brotherly spirit. Shall I call the Chief of Police?'

"The cur collapsed, sir.

"'No, no,' he cried wildly, 'for God's sake!'

"Then Lawler, who was almost as white as Sprint, rose.

"'This has gone far enough, Pulling,' he cried. 'How the devil you found....'

"'Shut up,' I said, 'this isn't all.'

"'This fellow," he cried, 'must be at once....'

"'Be quiet,' I said, pushing him back into his chair. 'I promised Hen, and by God I'll keep my word, that his brother should not suffer beyond the surrender of that land.'

"'What do you mean?' he said. 'Compound with....'

"'Compound with nothing,' I said. 'My lips are closed if....'

"'Your lips,' he cried, angrily.

"'What have you from *his* lips?' I said, pointing to Pete, who was watching us eagerly.

"Pete saw the point in an instant.

"'I've said nothing, nothing. You can't twist things that way,' he cried, defiantly.

"'True,' I said. 'You stick to that.'

"Lawler saw he was checkmated.

"'I'm the only one that can hang you, Pete, and you're safe if you obey me.'

"'What do you want?' he asked, piteously. 'I'll do anything.'

"'Hen said nothing was to happen to you if you gave up that land.'

"'I wo—' he began.

"'Tush!' I said. 'Do you want to hang? If you deliver that land to me you shall have twelve hundred dollars for it, the price Hen paid, and your safety from the gallows, on condition you clear out of these parts and are never seen within them again.'

"'Twelve hundred dollars wasn't what he gave for it,' Pete whimpered.

"'It is,' I said. 'Hen told me so.'

"'In the deeds it says—' he began.

"'Never mind the deeds,' I said, 'twelve hundred dollars *was* the price he paid. But there's no room for argument. I've got to do what he said. Yes or no? Will you give up that land or not? The Chief may get tired of waiting downstairs.'

"'Twelve hundred" he asked, looking up at me aside.

"'Twelve hundred dollars,' I said.

"'All right,' he replied. 'But I didn't do it.'

"'There's another side to that question,' I said, 'and, if I was you, I wouldn't publish your side of it too loudly: you might have to prove it.'

"To make a long story short, the upshot of that interview was Peter Sprint turned over the two hundred acres to me for the sum of twelve hundred dollars, and cleared out of the country. At first Lawler would have nothing to do with the transaction—swore it was compounding with felony and so forth. But, as I asked him: 'How else can you punish Pete? The fellow has not confessed anything, and, with my promise to Hen, no court in the land could induce me to give evidence.'

"'No court of law,' he said, 'would listen to your rigmarole for five seconds.'

"'Well, I have my opinion,' I said. 'If you won't take that land and pay the twelve hundred dollars for it I'll find somebody else that will.' That brought the money, though I don't believe at that time Lawler had much faith in its value for oil. He took it on spec., as he has half the lands he ever bought.

"For nearly a year after that I pestered Lawler to begin drilling. He wasn't going to waste money on my ghost stories, he declared. Ignorant fool! But he's got over that since. I've fixed that part of his education.

"It wasn't until the Spot Cash field—where most of his wells were—began petering out, which was last Fall, that he gave any heed to me. He met Professor Looker, one of those scientific know-it-alls—belongs to the State Geological Survey. In the course of conversation he asked him casually where he thought the next great oil field would be

discovered. There was some little light in Looker, for he said there was no place that he could see unless it were in the direction of Tianogo. Then, it appears, he gave him some ancient history about certain old wells which had been drilled years ago in Bloomer township. They didn't get much oil, but Looker had a theory that by this and by that the records indicated oil in paying quantities if the wells had been drilled deep enough.

"Now one of these wildcats happened to have been put down about a mile in a direct sou'west line from Sprint's land, and Lawler three months ago screwed himself up to the point to start a well. That's the history of the Jim Crow. So you see, as I said at the beginning, if it hadn't been for the murder of Sprint you and I wouldn't be here to-night, young fellow."

"Strange, isn't it?" said Raymond.

"No," replied Pulling, shortly. "Not at all."

"Have you seen the murdered man since that—er—first interview?"

"Oh, lots of times. Hen and I are good friends. He's promised to put me on to another mysterious murder that was committed in these parts many years ago. Some day I may make a regular business of hunting up these sort of cases."

Before he had time to think Raymond said, feeling his heart beat rapidly as he spoke: "I know of a case in which a friend of mine is interested that you might try your hand on. But it is a hard one."

"Nonsense. None of them are hard if you can only get hold of the right people. Of course, if I couldn't have got hold of Hen I couldn't have done anything."

"But this case happened years ago, and in England."

"Time and place don't count. I'll tell you something. I've been trying lately to get at the facts of the death of Cleopatra. I never took any stock in that asp business. I struck a clue the other night—I'm on to it—just wait a little. You'll see."

Pulling's eyes glistened in the moonlight. The joy of the discoverer at the threshold of success rang with a strange accent in his voice.

"But tell me your case, I want to make a collection of them. If it amounts to anything I may do something with it some day."

As they journeyed through the woods Raymond told the story of the crime for which his father suffered, omitting, however, the real names.

"That's a good one. Not bad at all," said Pulling, when he had concluded. "Famous scientist, you say—Tomlinson, eh?—I never heard of him."

"No?" said Raymond, feigning surprise. "He was, his works still are, well known on the other side."

"They are, eh? I'll go over that again with you some other time. Ah! there's the Jim Crow. Do you see those lights among the trees, there, up that bank? That's the dandy."

They were at the top of a hill, at a point where the road began a steep descent, with banks on both sides like walls. So high were the banks that the road was like a dark gully through the trees. Below—apparently several hundred feet below—a wide plain, flooded with the moonlight, stretched away for miles, and through it the Tianogo Creek, bright as silver, wandered with a multitude of sharp bends on its way to join the Allegheny.

"This is grand," cried Raymond.

"'Tisn't bad, is it," said Pulling, "but you get used to it. Here we are. Whoa! whoa!"

With much noise Pulling brought the horses to a stand by the side of a low rough timber shed built at the foot of the right bank.

A door was thrown open sharply, and, ducking his head as he made an exit, a tall man stood forth in the ruddy light which shot out with him from the interior. The shed was a boiler house that supplied steam to the Jim Crow well.

The tall man stretched himself and yawned.

"Is that you, Pulling?" he asked, sleepily peering before him.

"It is, Badger."

"I might know no other fly-by-night but you would be mooning 'round at such an hour. I'll be damned if you ain't a bat. Couldn't you have come later?"

This was a compliment to Pulling—reputation for the extraordinary tickled him.

"It's early yet, Badger."

"Certainly, certainly. When does it begin to grow late in your part of the country? That's what I'd like to know. You'd make a good, what-do-you-call-'m?—Peskynoes, is it?—where it's night all day long. Who's this you've got with you?"

Following Pulling, Raymond had alighted from the buggy.

"Mr. Lee, Mr. Badger," said Pulling, performing the office of introduction. "Friend of Lawler's. O. K. New man on the paper."

Badger held out a hand like a bear's paw.

"Glad to know yer," he said, awkwardly. "Come in."

"This, said Pulling, as they entered the shanty, is the Hotel de Jim Crow. Oysters and beer in every style."

"You needn't begin begging 'round for food or drink, said Badger, 'this is a strictly respectable house, let me tell you, and we close, we do, sharp at midnight."

"Anything new?" asked Pulling.

"No-p," replied Badger. "The Fluke Oil Co.'s well is into the first sand, they say. But they've got her boarded up tight as a drum and a picket guard around her. It's hard to find out much."

"I wish we could," said Pulling. "Lawler's got hold of the land to the south of her and can have the five hundred acres adjacent at a price."

"So that's why you two sneaked off to New York?"

Pulling winked knowingly. Then he said:

"Lawler'd give something to find out what that Fluke well is going to amount to. If she comes in big the price they've asked him for the five hundred acres wouldn't be high. They're sure to jump it up when they know it is a sure thing. Say, Badger, we must find out."

"It'll take a smarter fellow than you to find out, let me tell you. It beats the Jim Crow the way they've got her bottled up. The exchange fellows are on to her and there are a dozen scouts in the woods watching, but it is mighty little they've been able to get. They say the owners are

trying to work the market with her, and the boys don't mean to be left if they can help it. Lord, if she should be a 'duster.'"

"Go on! There's no chance of that," said Pulling, frowning. The possibility didn't please him.

"There ain't, eh? You never heard of such a thing, did you?"

Badger said no more, but it was enough to bring the conversation to a sudden stop.

Long afterwards, Raymond often thought how little heed he gave to this conversation, yet within a few days it decided the course of his life.

The shed they were sitting in was merely a number of rough boards, the cracks between which were filled with old paper and pieces of rag. Inside, along the walls, was a deep bench used for sleeping upon. In the centre of the room stood the sputtering boiler, with its pipes radiating along the floor and across the ceiling The door of the furnace was open, and it was more by the glow of the fire therein than by the smoky light of the single lantern hung in one corner that Raymond took notice of the foregoing particulars, of the old clothes hanging on pegs, the pile of tools and the coal scattered about the floor. Badger, who was seated in front of the furnace door, put his face between his hands and stared steadily into the fire. Pulling, bolt upright by his side, sat blinking his eyes rapidly in the ruddy glow. Raymond plunged into the midst of a troop of thoughts and was carried along with them as they scampered through the moonlight and circled around the hut of Henry Sprint. The story he had just heard of the bark peeler's fate forced him to mentally rehearse the crime for which his own father had suffered.

For a few moments the silence around the hut deepened. The only sound audible was the hissing of the steam escaping from loose joints in the pipes. At last Pulling jumped up, exclaiming:

"Badger, we *must* find out what that Fluke well amounts to."

From between his hands, but without a move, Badger said softly:

"Must we, eh?"

Later the three made couches for themselves on the wooden benches and "turned in."

In the morning, shortly after daybreak, Raymond was up taking his bearings. On the top of the bank above the boiler shed was the Jim Crow well. It was surrounded by a high picket fence like a stockade. In the centre of the space thus inclosed, overarched by the branches of the tall forest trees, rose the derrick. Through the heavy pipe that emerged from the floor in the middle of the derrick the oil was silently flowing from two thousand feet below the surface into huge wooden tanks. The ground was slimy with thick green oil; the air was permeated with the odor of it and with the rare gas that bubbled up with it and floated away in scarcely visible cloudlets. The atmosphere was in a combustible condition, and the sign "Smokers will be Shot" nailed on one of the trees was, under the circumstances, scarcely too violent a threat. Several men were at work within the well inclosure building additional tankage, for at that moment the Jim Crow was producing at the rate of twelve hundred barrels a day.

Back in the woods, several hundred feet north of the Jim Crow, was the Fluke Co.'s well, stockaded like the Jim Crow and guarded by half a dozen men. With the exception of these two evidences of man's handiwork everything on that side of the road was primæval forest. But, on the other side, in a clearing an eighth of a mile away, approached by a newly-made corduroy road, were the beginnings of the town of Catch-On. At that moment it consisted of a wide ploughed street, extending from one end of the clearing to the other. On this street were six wooden huts, three of which displayed legends as to the price and dimensions of schooners of lager, and a larger shanty, two stories in height and of considerable extension, labeled cursively in ink, like a packing-box:

"The Catch-On House—American and European plan."

In one of the windows was the familiar white and blue sign, "Western Union Telegraph Co."

Lawler, as Raymond discovered, was the owner of the land upon which the "town" of Catch-On stood; and

he learned from Pulling that the duties he was expected to perform "at first" was to hang around, keep an eye on all strangers, answer questions of any one who might desire to buy "lots," and gather all the news he could for the *Weekly Eye.*

"Lawler, you know," Pulling explained, "is going to boom Catch-On. We've got a column in the *Eye*—'Catch-On Crinkles'—for all the personals and gossip you can get hold of."

"Catch-On Crinkles," exclaimed Raymond, "what does that mean?"

"Oh, that's our artful alliteration—one of the tricks of journalism," said Pulling, laughing. "We meant Wrinkles, but the damn word begins with a W, so we had to make it a C—euphonized it as it were."

Started in this way, Lee began his new career as reporter for the *Eye*—the leading weekly in Tianoga County. Pulling introduced him to the proprietor of the hotel, the telegraph operator, the vendor of the colossal schooners and the ten cent "Straight Shot Rye, Warranted to hit the mark every time," and to many of the drillers and others who were stationed at Catch-On.

Raymond found it hard work to make work. He "hung around" the hotel and within the sacred precincts of the Jim Crow, and sent to Welltown every day by the stage the names of any new arrivals and all the floating gossip that reached his ears. It was very wretched stuff he thought, this news, but Pulling assured him it was "O. K." and bade him "keep it up."

The day after his arrival at Catch-On the Jim Crow was "opened," which meant that the owner, Pulling and others connected with the venture, ceased lying about it and strangers were given access to the well to verify reports. The event was followed by the advent of a number of producers from all parts of the Oil Region, and rumors were soon rife of many purchases of land at high prices in and around the vicinity of Catch-On, and that this one and that one were about to begin drilling. Soon the stage began to do a thriving business, always arriving full inside and out. Another vehicle—"The Opposition" it was called—was put

on the route, and within a week there was talk of building a railroad through the woods from Welltown.

Pulling spent a great part of his time hurrying between the two places. He brought to Raymond wonderful stories of the excitement that prevailed in Welltown and of the crowds that were flocking there and the rapid massing of boilers and tools and apparatus for drilling.

"Before the end of the month," he predicted, "there'll be a hundred wells going down in Catch-On. Lawler's going to start three new ones."

When Raymond made a few hours visit to Welltown he found that Pulling had not exaggerated the state of affairs. The town was in a ferment and the journey from Welltown to Catch-On had been converted into one of easy stages by the erection of a number of liquor shanties along the road. Heavy trucks and small detachments of carpenters began to arrive at Catch-On. A dozen new buildings were "run up" in almost as many days. On all sides, the forest began to resound with the rapping of hammers. Men seemed to be stealing in like the spies of an army to go quietly to work in the woods with feverish haste. Raymond caught the excitement. It was a new and not unpleasant sensation for him.

"Wait a little," said Pulling. "There'll be ten thousand people in Catch-On before you are sixty days older."

Raymond became greatly attached to this queer individual, who in turn sought his company, assisted him in his work by making it conform to the weird requirements of provincial journalism, and brought him cigars from Welltown.

"I don't smoke, myself," he said, "but I know those things are better than the stinkerees you get here."

At another time he said:

"I like you, Lee. You're the only fellow I can talk to sensibly."

This meant that Raymond was the only fellow who listened to his strange vagaries; and an attentive and patient ear was to Pulling as the gates of Paradise.

Every Saturday night Pulling arrived at the well with a little bundle of cigars which he insisted upon Raymond's

smoking on Sunday as they wandered through the woods or fished for trout in pools which the Tianoga filled with cool, clear, running water even in the summer dryness. Raymond had got to the human side of Pulling, and found, as in the stream they fished in, there were depths there amid the shallows.

During one of their strolls Raymond said:

"I wonder you haven't struck oil somewhere with the rest."

"'Tisn't for want of chances," Pulling replied. "I suppose I could have made my pile if I'd cut away and sailed in with the crowd, but for fourteen years I've stuck to Lawler. I'll tell you why."

Pulling was sitting on a huge boulder. He hesitated before continuing, which was an unusual thing for Pulling.

"Fifteen years ago," he began, "I was engaged."

Then he stopped, hesitated, and began again.

"It was my cousin—she took a cold—the spring we were to be married she died. They called me a crank even then—and you know a crank has no feelings. Besides, I was poor. It is not right to be a crank and poor. It was before my father made the money he has lost since—and I was alone in Welltown. No one disturbed me—they left me alone. That didn't matter, but—I was sick, or sickish for a time—something wouldn't work right. Perhaps I was in a bad state—I dont know—they said so—when one night Lawler, for whom I'd done some little book-keeping, came to my rooms and said in a way that wasn't quite like Lawler: 'Pulling, I've got to make a trip West and want some one to go with me to help me a little. I've got your tickets and want you to come with me to-morrow.'

"I thought it was business and went. We were gone a month, and when I got home again and remembered that while we were away Lawler hadn't asked me to do a thing for him I began thinking I owed Lawler something. Do you know I hadn't even thanked him. I got up and went straight to him and said, offering him my hand: 'Mr. Lawler, do you want some one you can count on?' He took my hand, and said: 'Pulling, I'm sure I can count on you.' And he has—ever since."

A little stillness seemed to fall upon the forest.

It was broken by Pulling.

"Pshaw," he said, "money's the dearest thing a man buys."

He added suddenly:

"I passed a very pleasant night last night—Who do you think?"

Pulling smiled with pleasure.

"I couldn't guess," replied Raymond, who had discovered the immense range of his friend's nocturnal acquaintances.

"Mohammed," said Pulling, triumphantly. "He's one of the fellows I've been trying to meet for I can't tell you how long. At last I've reached him—through Wesley. I had no idea they were on good terms, but they are—quite sociable—find, like the two poles, that though they occupy different ground, they have much in common. Ha, ha."

"I don't quite understand," said Raymond, advancing a question he had long desired to propound, "whether these —er—friends of yours are to be regarded as the very personages who once lived or as only the shadows of them?"

Hitherto Raymond had listened to Pulling's stories about his "friends" as unquestioningly as though they were people living in the next street.

"For instance," continued Raymond, "do you believe it was the real Henry Sprint that paid you that visit you told me or was it all only a dream you had?"

"A dream!" exclaimed Pulling. "A dream! and I wider awake than you are this minute. No, sir. He was as substantial as you are or these trees or this rock I'm sitting on."

"Well, we're substantial enough," said Raymond.

"I'm not so sure about that," said Pulling, decisively. "It's a grave matter of doubt with me. Does anything exist but myself and what I call the Great Suggestor?"

"The what? the Great Suggestor?"

"Yes. The matter is very simple. There is my mind, and a being or another mind, what you will, outside of my mind, who suggests to me, as in hypnotism, all that I see, feel or do. That's the Great Suggestor. I am the subject, the Great Suggestor is the operator. When my mind

works, 'Pulling,' says the Great Suggestor, in effect, 'you are to see this, hear that, feel the other.' The earth is a suggestion. My life and all in it are a string of suggestions. I am the reality that links all my experiences together. I experience change upon change, I come and go, see new scenes, meet new faces, grow old; but it is all nothing but a moving panorama—the commands of the Great Suggestor taking form in my brain. So you perceive it isn't by any means *certain* that you exist. I'm going to work that idea out some day. What do you think of it. Good, isn't it?"

"Immense. But don't annihilate *me* in your summary way," said Raymond, laughing.

"Mind, of course, I don't mean to say you don't exist at all. You do, but only in my brain."

"But," objected Raymond, playing with his friend's crotchet, "I not only see the same world that you do, but I've seen and I know things that you do not. I have experiences that lie outside of yours, and of which you have no knowledge."

"Well, that's nothing. You and your experiences are only suggestions given to me. Everything you are is part of the suggestion of which you are a part. You understand."

Remembering how keenly irritable Pulling was under an argument pushed to the point of hostility, Raymond continued the subject obliquely by saying:

"And so I, Wesley, Mohammed and the others are merely so many suggestions?"

"Yes; that's what I'm *inclined* to think. But my mind isn't quite made up yet. I merely incline strongly to that view."

"Then am I to say the people I have seen and those that have come to me—in—the Henry Sprint fashion.....'

"What?" cried Pulling, eagerly. "Do they come to you, too?"

"Oh, well, not quite as they come to you," replied Raymond, amused at the interest he had aroused.

"How, then? Tell me?"

"My experience in visions or whatever else you term these waking visitations is limited to a single apparition twice repeated."

Proceeding, Raymond recounted how on two occasions he had seen a fierce horror-stricken face of one he did not know peering into his.

Pulling was tremendously interested in the story. His sensitive, nervous nature was morbidly excited by any tale of the kind.

"In the first case," he said, biting the nail of one of his forefingers rapidly and blinking his eyes nervously, "the actual man you encountered was the 'bus driver, Zip?"

"Yes," said Raymond, wondering what Pulling would make of his story.

"And in the second case it was your friend Winter?"

"That's right."

"The face wasn't theirs, nor like theirs, eh?"

"Not a bit."

"Then of course you'd seen it somewhere before," was Pulling's tame rationalistic conclusion.

"No more than you'd seen Wesley before."

"But the cases are different. This of yours is only a face. At some time or another somebody with a face like the one that reappeared must have confronted you."

"But I have no remembrance of any such thing."

"It isn't necessary that you should remember. Such momentary recollections—now, *they* are suggested—are common. In books of psychology they call it hypermnesia. Think a minute; have you never been in any situation where such an experience as that of the face could have happened to you?"

An idea that thrilled Raymond flashed upon him.

"I was in the house of—my friend—when that murder I told you of the other night was committed. But I was only a child."

"That doesn't matter. Gracious, of course—I have it. Why, man, it may have been the murderer you saw. You don't remember his appearance?"

"No."

Could Pulling be right? Raymond had no idea of his father's face, couldn't recall it, and Pulling's suggestion almost maddened him. The forest disappeared from his

sight. His memory was rushing to and fro amid the past like a wild creature seeking what it could not find.

After a while Raymond heard:

"Say, Lee, Lee, do you hear me? To-morrow night, mind, we'll see if we can't get into that Fluke well. It means several thousands to Lawler if we can find out what she amounts to."

"All right," Raymond replied, vacantly.

To be continued.

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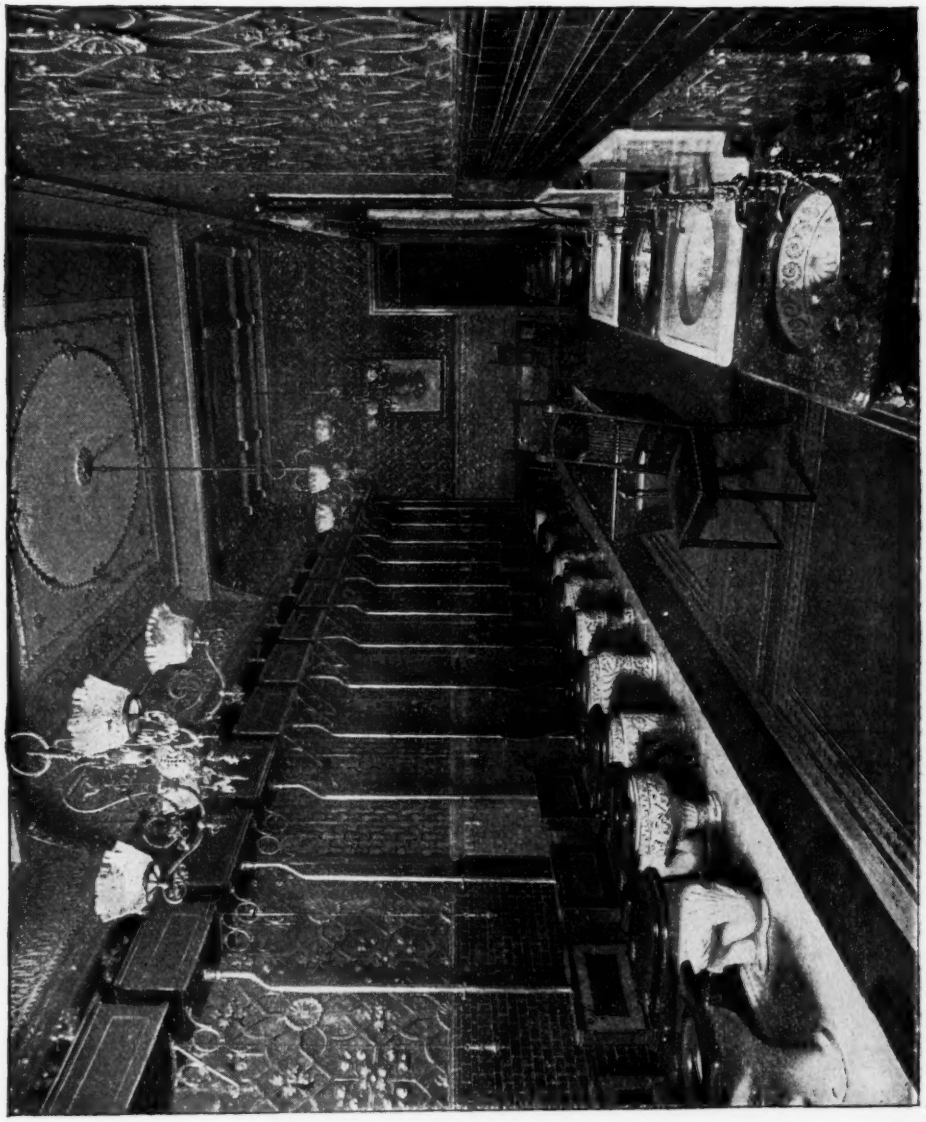

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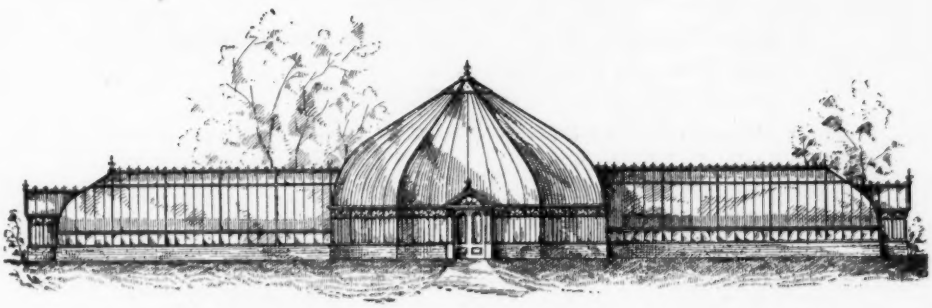

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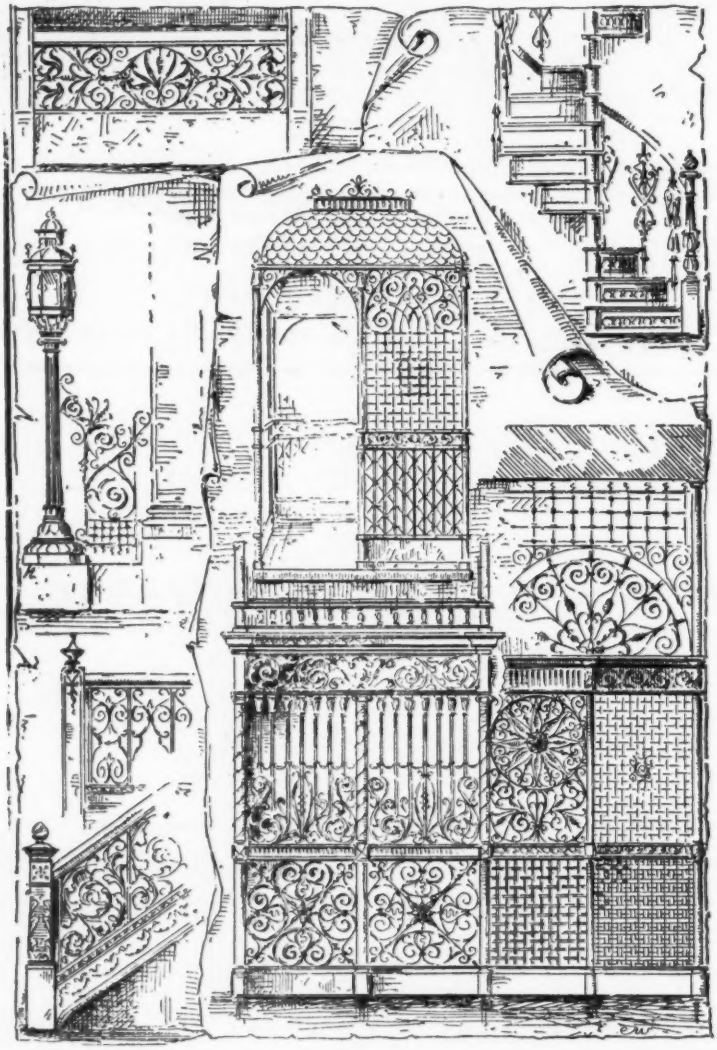

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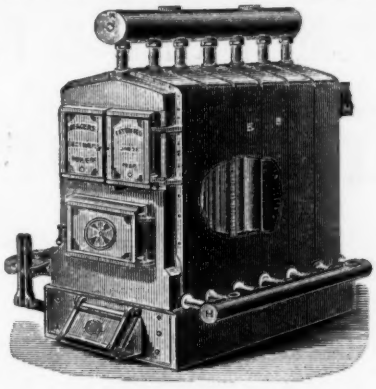

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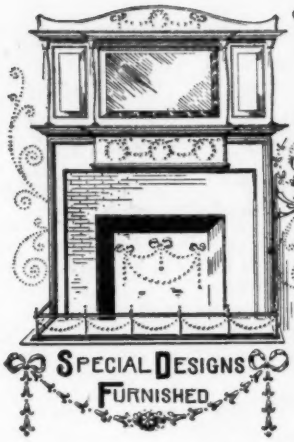

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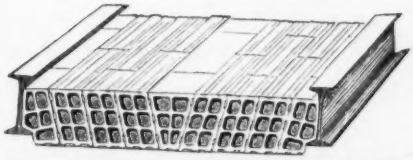

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Markleton Sanatorium Co., Markleton, Pa.
Duquesne Theatre, Pittsburgh, Pa.
National Bank of Commerce, Pittsburgh, Pa.
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Residence of Mrs Hostetter, Pittsburgh, Pa.
Supt's Headquarters Penn. R. R., Altoona, Pa.
First National Bank, Cooperstown, Pa.
U. S. Court-House and Post-Office, Williamsport, Pa.
Commonwealth Building, Scranton, Pa.
Jackson Street Baptist Church, Scranton, Pa.
Hope Building, Brown University, Providence, R. I.
R. I. Hospital Trust Co., Providence, R. I.
Calvert Hall School, Baltimore, Md.
Residence of Mr Evans, Ruxton, Md.
Straights University, New Orleans, La.
State Capitol, Columbia, S. C.
Y. M. C. A. Building, Glens Falls, N. Y.
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Parties purchasing a house from the so-called "Speculative Builders" will find it greatly to their advantage to ascertain, if possible, the material that it is plastered with, and if it is not done with King's Windsor Asbestos Cement by all means insist upon the seller signing an agreement to keep the plastering in order for at least three years and pay all damages to your decoration that may occur by falling walls and ceilings.

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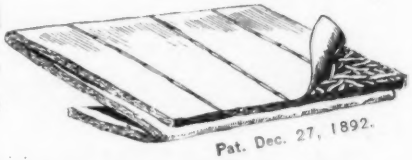

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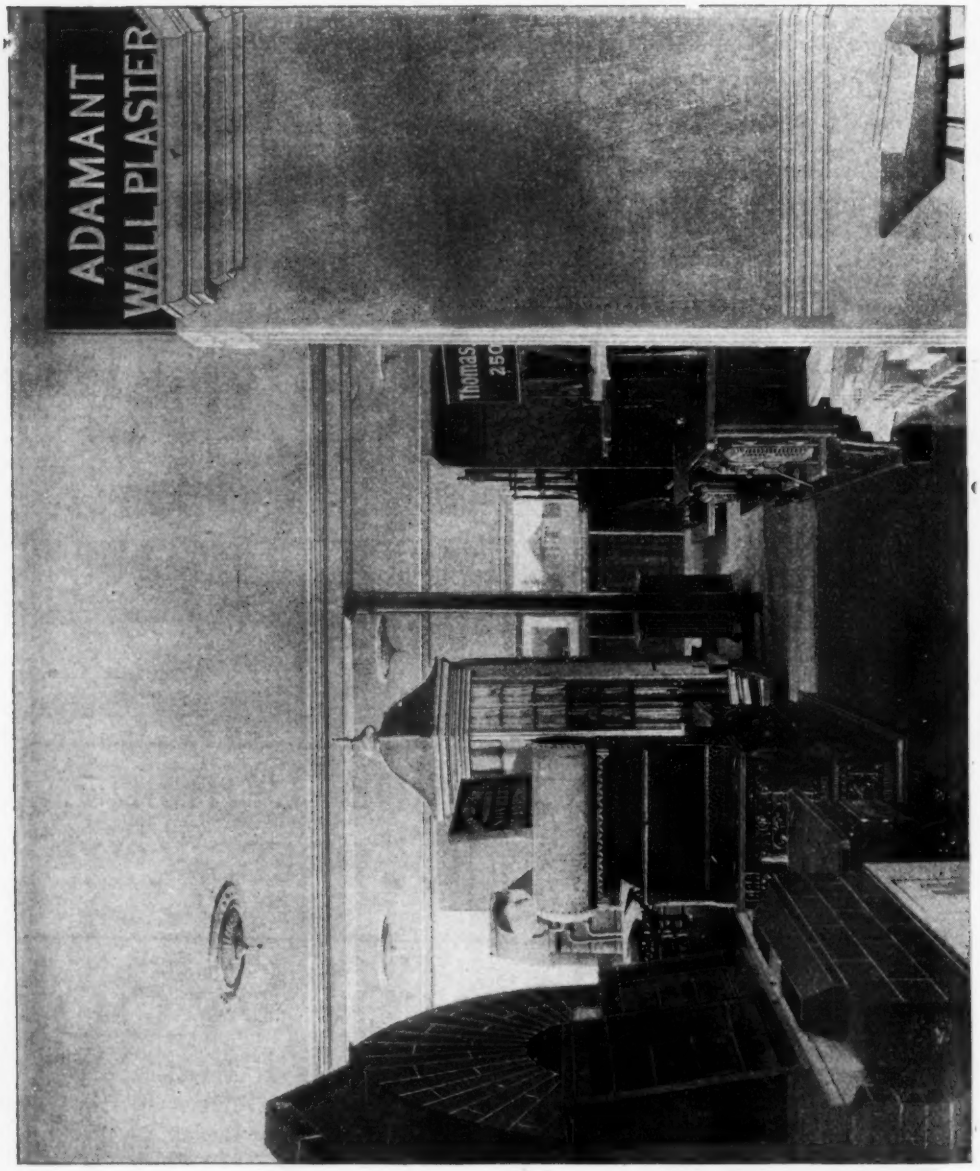

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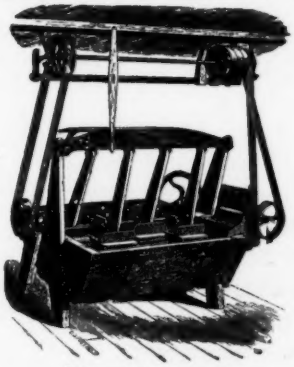

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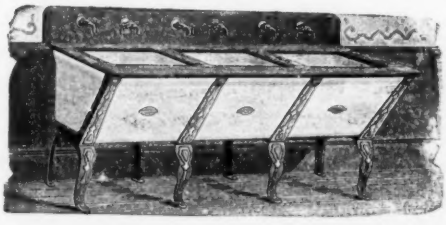

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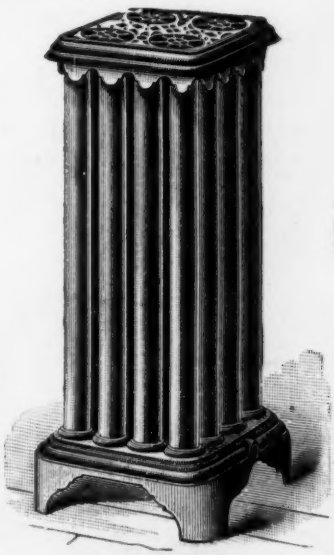

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Suggestions.

ON page 229 of this magazine the series of articles dealing with SUBURBAN RESIDENCES is continued. The purpose of these papers is a practical one, viz., to assist in bringing about a higher order of DESIGN, PLAN AND CONSTRUCTION in the thousands of suburban dwellings erected annually in this country, the immense room for improvement in which is conceded.

The Difficulty is Chiefly with the Owner.

In nine cases out of ten he betakes himself to a BUILDER who more frequently than not is merely our old friend HAYSEED engaged in a mechanical pursuit. He leaves the arrangement of practically everything to him, save perhaps one or two external or internal features of his house upon which he has set his mind. The result is a stereotype dwelling—designed, planned, constructed and equipped in the stereotype manner.

The Builder is rarely an innovator.
He adopts improvements slowly.
To obtain the highest results the owner must inform himself.
Even the architect would rather deal with an instructed client.

If you desire the highest order of house you must INFORM YOURSELF. The series of articles now running in this Magazine will instruct you in the principles and methods which govern good design and substantial construction. In the equipment of your home there are scores of materials and devices every one of which meets a REAL NEED of the householder. In many cases it will not cost you a cent more (and at most only a trifle more) to adopt them, BUT YOU MUST INFORM YOURSELF. In response to requests we have gathered on the following pages a few Suggestions which are worth your attention.

MANTELS.

WHAT is the centre-point of a room? the spot upon which the eye fixes itself and around which everything in the room, as it were, groups itself? Obvious answer—the mantel and fireplace. Strange, then, isn't it? that people are so careless of, often so indifferent to, the character, or more correctly, the characterless character of this centre-piece. They pay—for it is *they* that pay, no matter who does the ordering—$75, $100 or $150 for the parlor mantel in an average suburban house, and nine times out of ten get—what? A crude construction of little, shapeless spindles, shelves and beveled glass thrown together. A thing of no attractiveness, of no artistic merit whatever.

Yet there are in the market designs distinguished by taste and refinement—the work of trained designers, beautifully made. They cost no more than the crude article. Whether you get the one or the other in your house is simply a matter of choice. We can give you artistic mantels costing from $50 to $150. Is it not worth your while to call to see us and inspect for yourself what we have to offer, or to send to us for information as a preliminary to action? By making this suggestion we are serving your interest as well as our own.

WM. H. JACKSON & CO.

Designers.
Makers.

Broadway, Union Square and 18th St.

Weather Vanes.

A WEATHER VANE is an essential feature in the proper equipment of the modern suburban dwelling. It not only points the direction of the wind, something we all want to know, and instinctively glance upward for the indication, but imparts a certain undefined *tone* to the homestead place. As children we used to write: "All is not gold that glitters." In this case all *is* gold that glitters, for my copper vanes are gilded with 23-carat gold leaf, a permanent covering, the radiance of which the action of the elements will not dim. Assuming that you will place a vane or tower ornament at some point of elevation about your premises, I advise against the use of iron. While lightness and strength are requisite, iron will rust out, discolor its support, operates with friction, will not turn readily in the wind, and therefore performs unreliable service. I have been manufacturing weather vanes, tower ornaments and finials for over thirty years, and in quality, durability and taste in design and finish they have become the standard goods of their kind. My catalogue, to be had for the asking, furnishes several hundred different designs. Write for it.

T. W. JONES, Manufacturer,
170 and 172 Front St., New York.

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THE importance of placing a good dumb-waiter in a dwelling—one that will *satisfactorily* do the work required, and *keep in order*, needs no argument. The correctness of this proposition has probably been demonstrated in an object-lesson of broken crockery in your past experience. If you are building in the country, don't trust too implicitly in the judgment of your local builder, who frequently knows little about a well-equipped dumb-waiter, and is cheerfully sanguine that any kind (or thing) will do. Why not leave that fixture a blank in the specifications until you have had time to send for one of our catalogues? Perhaps we can offer you a few useful suggestions if you will write us the particulars of the case; or, refer you to the nearest dealer, where you can inspect the apparatus.

The "Paragon" waiter is honestly built and embodies no uncertain devices. It runs easily and without noise. A child can operate it with safety for it cannot drop "accidentally." The instant the rope is let go it self-locks and motion ceases. This waiter will serve you equally as well as it does thousands of others. We can show you full-sized working models at our manufactory.

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Interior Trim.

THERE are one or two facts which you must not lose sight of if you desire a really successful, artistic and durable interior to your house. If you leave it to your Builder he will surely give you a common-place, cheap-looking result. Cheap-looking but in fact the most expensive, because although it may cost you a few dollars less, perhaps $10 a room less than the real thing, it will miss the very effect we are sure you are seeking for and missing which you will not be satisfied. We want to recommend to you the use of two woods:

MAHOGANY FOR YOUR DINING-ROOM.

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Mahogany is the imperial product of the forest—the King of Woods. It possesses pre-eminently the richness, the elegance, the tone which are, in a sense, only imitated in other woods. Mahogany is everlasting. It improves with age. And mark this, as the cost of your trim lies largely in the cost of the labor necessary to form it, finish it, and place it in position, you will be at very little increased expense if you use the best wood instead of only the second best. We throw these points out to you as suggestions. The subject is certainly worth a little investigation on your part. The first step is to send a line to, or call upon the undersigned, who are the largest dealers in Mahogany in the world.

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Cement.

IT is curious to notice how much care is given to the selection of the brick or the stone for the mason-work of the foundation or of the superstructure of a house. The supposition apparently is, that to select or specify a good brick or a good stone insures good walls. People leave out of consideration the Cement, which is the *vitality of the wall*—the real source of its strength and durability. It is safe to say that as many as one-half the houses erected fail seriously in this respect. The usual form of specifications for masonry read to the effect that "good" cement is to be used, but with the average builder this is simply a pleasant way of saying that the builder will use whatever cement seems "good" to him. The house owner, to protect himself and insure first-class work should stipulate that the BROOKLYN BRIDGE BRAND of Rosendale Hydraulic Cement *shall be used*. This is a cement of the very highest quality. It is the strongest, darkest in color, and will stand the highest *tensile* and compressive tests both neat and with sand. It will cost you no more than the ordinary Rosendale Cement. *It is the best cement manufactured.*

Specify the cement of this Company. It was used in the construction of the Brooklyn Bridge, and all bridges over the Harlem River and many heavy structures throughout the country. The United States Government is also a heavy user. We guarantee 300 *pounds net weight* to each barrel.

The New York & Rosendale Cement Co.,

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Telephone, 190A Franklin. WILLIAM C. MORTON, *Secretary.*

Copper Boilers, Bath Tubs, Etc.

IN house construction, perhaps more than in anything else, the article cheapest at first cost is very seldom really the cheapest. It is the subsequent repairs which determine the true cost. A dollar or two saved in the initial outlay is a dollar or two saved very injudiciously, if each year entails a repair account that becomes increasingly heavy. This sort of false economy is remarkably prevalent, particularly in construction, handed over without any guarantee to whatever contractor or mechanic first quotes a "satisfactory price." Manage your affairs in this way and in nine cases out of ten you get poor material. To safeguard yourself you must stipulate for a SPECIFIC ARTICLE. In arranging for your copper boilers, bath tubs, showers, sinks, or other copper articles, do not be content to demand an article merely of given dimensions or of a certain character. See that you get first-class materials. You will get this if you will *insist* upon your plumber *using the goods manufactured by the undersigned.* It will cost you no more than the inferior article.

HENRY STEEGER,

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MY LOCK MACHINES are vastly superior to any of the old kinds that require a brake, check rope or friction to hold the load.

They hold the load automatically at any point. They cannot run down accidentally; so save breaking heads, arms or dishes. You can learn all about them by writing for Catalogue.

If you are going to build a house in City or Country, first "inform yourself" and you will know where to get the best Dumb-Waiters or Elevators.

My Catalogue covers a wide range of Elevators for hand or power. Send for it.

J. Q. MAYNARD,

114 Liberty St., N. Y.

MENTION THIS PAPER.

Bath-Tubs.

IT is a truism that no house is complete without a bath-tub, and you, reader, will want one, of course, in the pretty cottage you are building out in the suburbs this season. Now, there are bath-tubs and bath-tubs. Some are costly and others do not always meet expectations. We want to say right here: Don't accept the first thing in the shape of a tub that your plumber or carpenter, perhaps, may offer, without first having "informed yourself," as the title page, headed "Suggestions," in this magazine, says you should do, regarding the new Sanitary Steel-Clad Tub. Yes, it is new, and a good one, too. If we had your address we would send you a catalogue. It will pay you, however, to write for one, because the tub is strictly a first-class production, fit for any bath-room anywhere, sure to satisfy you, particularly when you come to know how cheaply it can be bought—**far less than any other first-class tub on the market.** The steel-clad tub is thoroughly made of metal, steel on the outside and planished copper within, the only wood about it being the polished hardwood rim. It combines so many favorable features in its construction that a brief statement regarding it is entitled to a hearing. Constructed of metal, hence possessing great strength, it is impervious to decay, warp or shrinkage, and is rust-proof and durable. The tub is comparatively light, weighing only about 100 pounds, therefore overcoming the objection so frequently urged against the heavy, solid, and high-priced iron or porcelain tubs. Mounted on four ornamental iron feet, with the exterior susceptible of being handsomely decorated, and set up open and free from all encasement, the tub presents as handsome an appearance as the best made. It is furnished in three sizes and in both the standard French and Roman patterns.

The Steel-Clad Bath Company,

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Ventilating Grates.

AS a decorative feature, nothing surpasses a well-studied fireplace. It forms the center of the home circle, the blazing fire giving cheer and comfort to all.

But a fireplace should be more than a decoration. Primarily, the fire is for heating, and here the average grate fails. The larger portion of heat passes up the chimney, and the small part realized does not compensate for the cold drafts that the grate produces.

To utilize this waste heat has been the one thought in the construction of the **JACKSON VENTILATING GRATES.** These have air chambers around the back and sides, being connected below by a cold-air box with out-doors, and above with regular hot-air registers. In operation, not only the direct radiant heat is utilized, but also, and more important, the waste heat of other grates is saved in the form of hot air. By the heat-saving chamber, four times the heat of ordinary grates is realized, and each ventilating grate will heat several rooms on one or different floors, in midwinter.

It need be only suggested that in Spring and Fall, when the furnace or other cellar heater makes the house oppressively warm, one of these grates introducing warm, pure air, will heat and ventilate an entire residence, and with an economic use of fuel.

Having been in successful use for fifteen years (during which time the repairs have not averaged four cents per grate, per year), reports can be furnished of those in use in any locality desired.

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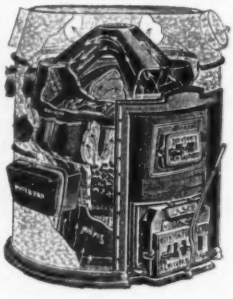

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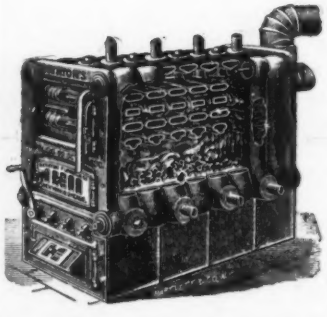

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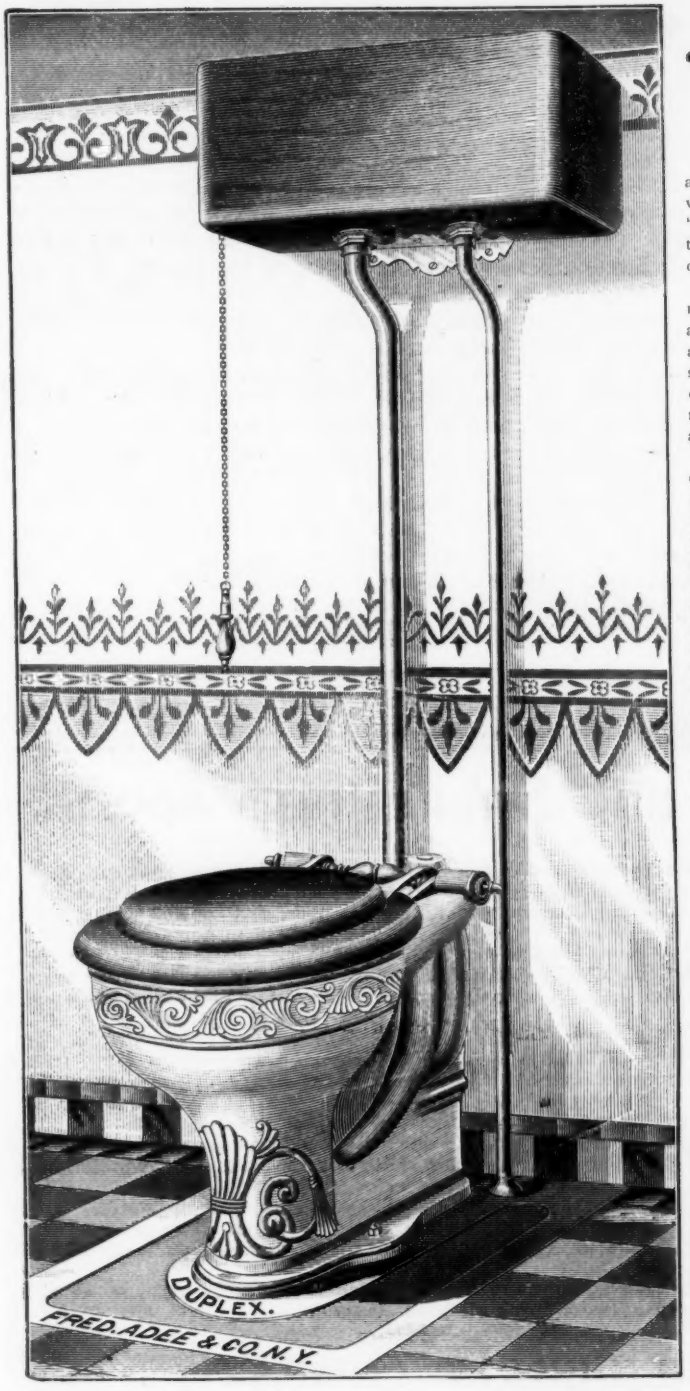

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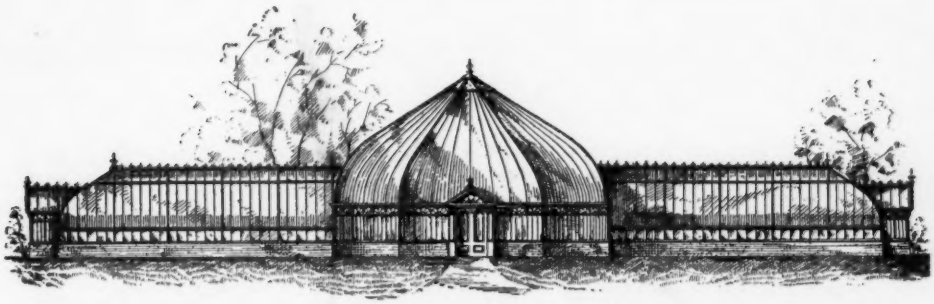

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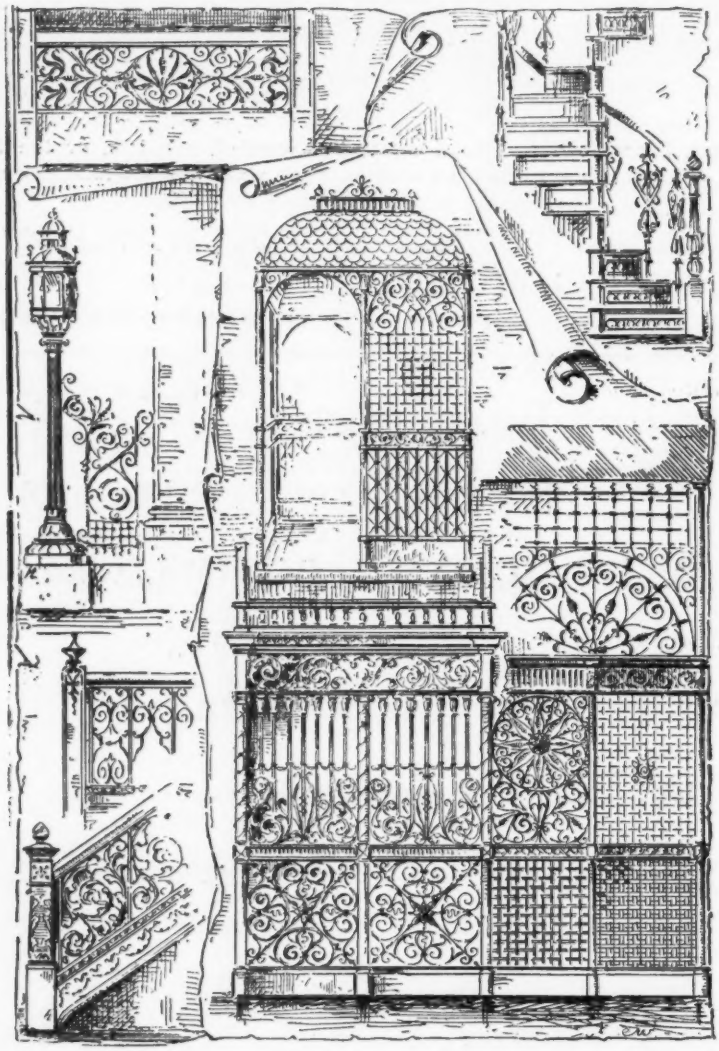

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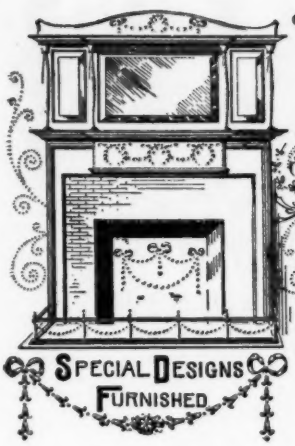

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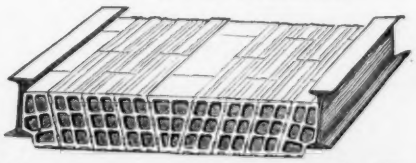

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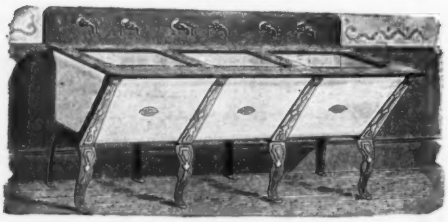

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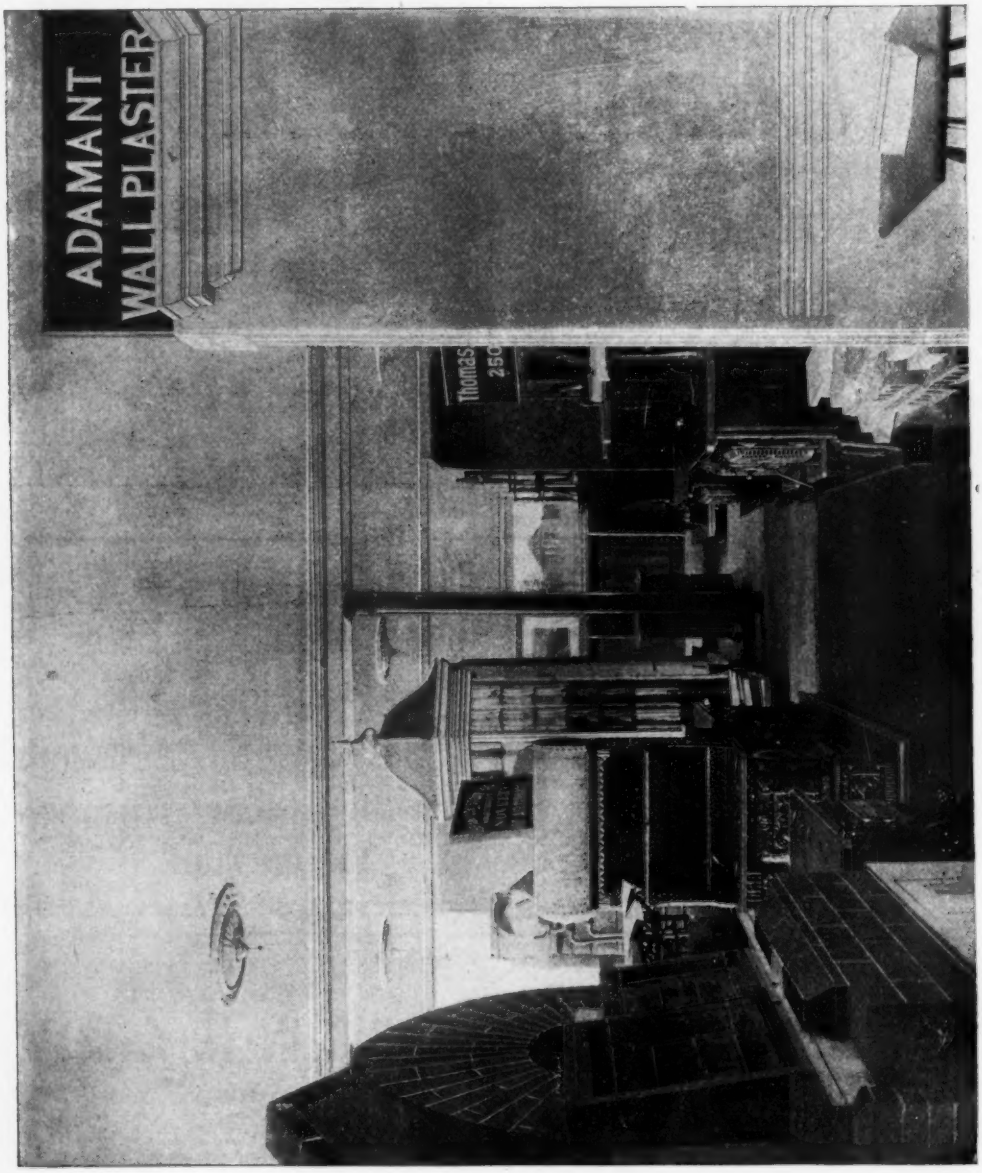

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